VPDES PERMIT PROGRAM FACT SHEET

This document gives pertinent information concerning the issuance of the VPDES permit listed below. This permit is being processed as a **Large Concentrated Animal Feeding Operation (CAFO)** permit for a facility that was previously issued an individual VPA permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260 et. seq (effective 1/6/11). The discharge results from release of storm water and wastewaters from an existing CAFO via Discharge Points 001, 002, 003, 004, 005, 006, 007, 008, 009 and 010.

1. PERMIT NO.: VA0C50001 EXPIRATION DATE: NA – New issuance

2. FACILITY NAME AND LOCAL MAILING ADDRESS

Murphy Brown LLC, Farm 1-5 (Proctors Br)
P. O. Box 1240
Waverly, VA 23890

FACILITY LOCATION ADDRESS (IF DIFFERENT)

1240 Bacon Street
Ivor, VA 23890

CONTACT AT FACILITY:
NAME: R.O. Britt
TITLE: Sr. Env. Resource Mgr.
PHONE: (804)-834-2109
EMAIL: robritt@murphybrownllc.com

CONTACT AT LOCATION ADDRESS
NAME:
TITLE:
PHONE: ( )
EMAIL:

3. OWNER CONTACT: (TO RECEIVE PERMIT)
NAME: Mr. Kraig Westerbeek
TITLE: Assist. VP of Env./Health/Safety
COMPANY NAME: (IF DIFFERENT)
ADDRESS:

PHONE: (910)-293-3434
EMAIL:

CONSULTANT CONTACT:
NAME:
FIRM NAME:
ADDRESS:

PHONE: ( )
EMAIL:

4. PERMIT DRAFTED BY: DEQ, Water Permits, Regional Office

Permit Writer(s): RE Smithson Date(s): 04/14 -5/14

Reviewed By: M.H. Sauer Date(s): 5/8-15/14; 5/28/14

5. PERMIT ACTION:

(X) Issuance ( ) Reissuance ( ) Revoke & Reissue ( ) Owner Modification
( ) Board Modification ( ) Change of Ownership/Name [Effective Date:]

The existing permit for the site was issued as VPA01074, which was issued on May 9, 2001 and expired on May 9, 2011

6. SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:

Attachment 1	Site Inspection Report/Memorandum
Attachment 2	Discharge Location/Topographic Map
Attachment 3	Schematic/Plans & Specs/Site Map/Water Balance
Attachment 4	Discharge/Outfall Description
Attachment 5	TABLE II - Effluent Monitoring/Limitations
Attachment 6	Special Conditions Rationale
Attachment 7	Receiving Waters Info./Tier Determination/STORET Data/Stream Modeling/303(d) Listed Segments
Attachment 8	TABLE III(a) and TABLE III(b) - Change Sheets
Attachment 9	NPDES Industrial Permit Rating Worksheet
Attachment 10	Chronology Sheet
Attachment 11	Other Documentation
Attachment 12	Definition of Terms

APPLICATION COMPLETE: 04/16/14 (outfall map locations rec.)

7. **PERMIT CHARACTERIZATION:** (Check as many as appropriate)

(X) Existing Discharge
( ) Proposed Discharge
( ) Municipal
SIC Code(s)
(X) Industrial
SIC Code(s) 0213
( ) POTW
( ) PVOTW
(X) Private
( ) Federal
( ) State
( ) Publicly-Owned Industrial

(X) Effluent Limited
( ) Water Quality Limited
( ) WET Limit
( ) Interim Limits in Permit
( ) Interim Limits in Other Document
( ) Compliance Schedule Required
( ) Site Specific WQ Criteria
( ) Variance to WQ Standards
( ) Water Effects Ratio
(X) Discharge to 303(d) Listed Segment
( ) Toxics Management Program Required
( ) Toxics Reduction Evaluation
( ) Storm Water Management Plan
( ) Pretreatment Program Required
( ) Possible Interstate Effect
( ) CBP Significant Dischargers List

8. **RECEIVING WATERS CLASSIFICATION:** River basin information.

Outfall No(s): 001, 002, 003, 004, 005, 006, 007, 008, 009 and 010

Receiving Stream: Unnamed Tributary to Blackwater River
Basin: Chowan River and Dismal Swamp
Subbasin: Chowan River
Section: 2
Class: VII
Special Standard(s): NEW-21
Tidal: NO
7-Day/10-Year Low Flow: MGD
1-Day/10-Year Low Flow: MGD
30-Day/5-Year Low Flow: MGD
Harmonic Mean Flow: MGD

OUTFALL NUMBER	Latitude	Longitude	Name of Nearest Potential Receiving Stream	Area Contributing Flow
001	36°58'37.87" N	76°50'48.91"W	UT to Blackwater River	Farm 1 Production Facility
002	36°58'40.66" N	76°50'.35.85"W	UT to Blackwater River	Farm 1 Production Facility
003	36°58'21.66" N	76°50'.46.51"W	UT to Blackwater River	Farm 2 Production Facility
004	36°58'31.07" N	76°50'54.58"W	UT to Blackwater River	Farm 2 Production Facility
005	36°58'24.06" N	76°50'58.56"W	UT to Blackwater River	Farm 2 Production Facility
006	36°57'53.18" N	76°50'51.84"W	UT to Blackwater River	Farm 3 Production Facility
007	36°57'56.08" N	76°50'49.92"W	UT to Blackwater River	Farm 3 Production Facility
008	36°58'15.89" N	76°51'02.53"W	UT to Blackwater River	Farm 4 Production Facility
009	36°58'09.16" N	76°50'52.16"W	UT to Blackwater River	Farm 5 Production Facility
010	36°58'08.15" N	76°50'43.83"W	UT to Blackwater River	Farm 5 Production Facility

9. **FACILITY DESCRIPTION:** Describe the type facility from which the discharges originate.

EXISTING industrial discharge resulting from a swine wean to finishing production facility.. Farm 1-5 consists of 36,750 swine weighing 55 pounds or over and 15,750 swine weighing under 55 pounds (52,500 total). Approximately 51.1 MG of wastewater is generated at this site annually and 477 acres of land under the control of the applicant are available for land application of this wastewater to hay and row crops.

Effluent is treated in a two stage anaerobic lagoon system. Samples are taken to establish the nutrient content of both lagoons and irrigation is typically conducted with effluent from the secondary lagoon. Storm water runoff is collected in one of ten secondary containment basins (grass covered earthen structures that collect runoff from production area).

10. **LICENSED OPERATOR REQUIREMENTS**: (X) No ( ) Yes Class:

11. **RELIABILITY CLASS**: Industrial Facility - NA

12. **SITE INSPECTION DATE**: 03/13/14 **REPORT DATE**: 03/17/14

Performed By: Clyde Gantt & RE Smithson

SEE ATTACHMENT 1

13. **DISCHARGE(S) LOCATION DESCRIPTION**: Provide USGS Topo which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: Raynor Quadrant No.: 37A

SEE ATTACHMENT 2

14. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.]. FOR INDUSTRIAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE PRODUCTION CYCLE(S) AND ACTIVITIES. FOR MUNICIPAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE TREATMENT PROVIDED.**

Narrative:
Storm water runoff is collected in one of ten secondary containment basins (grass covered earthen structures that collect runoff from production area). Each BMP is inspected daily to ensure that there are no visible contaminants prior to being released by gate valve to the receiving ditch/stream. If contaminants are observed, a recovery process is implemented prior to valve opening to release rainwater. These procedures will be addressed in the Farm Operating Manual.

SEE ATTACHMENT 3

15. **DISCHARGE DESCRIPTION**: Describe each discharge originating from this facility.

SEE ATTACHMENT 4

Discharge Points	DISCHARGE SOURCE	TREATMENT	ADDITIONAL BEST MANAGEMENT PRACTICES DISCHARGE SOURCE
001&002	Production Area - Farm 1	Secondary Containment	Nutrient Management Plan, Buffers, Setbacks, Conservation Tillage, Grass Filter
003,004, & 005	Production Area - Farm 2	Secondary Containment	
006&007	Production Area - Farm 3	Secondary Containment	
008	Production Area - Farm 4	Secondary Containment	
009&010	Production Area - Farm 5	Secondary Containment	

16. **Discharge and Pollution Management Authorization:**

The facility is authorized to manage pollutants at the locations identified in the permit application and the facility's Nutrient Management Plan (NMP), and is authorized to discharge:

a. from the facility's production area, manure, litter or process wastewater to surface waters of the state in the case of an overflow caused by a storm event greater than a 25-year, 24-hour storm;
b. from areas identified in the permit application as discharge points, manure, litter or process wastewater. The discharge points shall be monitored as specified in Part I B.1.a.; and
c. from the land application area(s), agricultural storm water.

The NMP is enforceable through this permit.

COMBINED TOTAL FLOW:

TOTAL: .032 MGD (for public notice)

PROCESS FLOW: N/A MGD (IND.)

NONPROCESS/RAINFALL DEPENDENT FLOW: .032 MGD (Est.)

DESIGN FLOW: N/A MGD (MUN.)

17. Monitoring Requirements:

Stormwater Monitoring:

Rationale: Stormwater Monitoring is required of the permittee by 9VAC25-151-70 Part I.A. Visual monitoring of stormwater shall be performed at the outfalls listed in 15. above per the following table. The permit contains several conditions under which the monitoring shall be performed, including:

a. All storm water discharge samples (except snowmelt samples) shall be collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging from the facility to surface waters. All samples (except snowmelt samples) shall be collected from the discharge resulting from a measurable storm event.

b. The examination of the sample shall be performed at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December, shall be conducted in a well-lit area and shall document observations.

c. The sampling requirement can be waived if documentation is completed that demonstrates either that no storm event resulted in runoff during normal working hours from the facility during a monitoring quarter; or, that adverse weather conditions prevent the collection of samples, in which case a substitute sample may be taken during a qualifying storm event in the next monitoring period.

FEATURES TO BE MONITORED IN THE PRODUCTION AREA					MONITORING REQUIREMENTS	
					Frequency *	Sample Type **
Discharge points to surface waters*** (as defined in the permit application):					Quarterly	Grab
001	36°58'37.87" N	76°50'48.91"W	UT to Blackwater River	Farm 1 Production Fac		
002	36°58'40.66" N	76°50'.35.85"W	UT to Blackwater River	Farm 1 Production Fac		
003	36°58'21.66" N	76°50'.46.51"W	UT to Blackwater River	Farm 2 Production Fac		
004	36°58'31.07" N	76°50'54.58"W	UT to Blackwater River	Farm 2 Production Fac		
005	36°58'24.06" N	76°50'58.56"W	UT to Blackwater River	Farm 2 Production Fac		
006	36°57'53.18" N	76°50'51.84"W	UT to Blackwater River	Farm 3 Production Fac		
007	36°57'56.08" N	76°50'49.92"W	UT to Blackwater River	Farm 3 Production Fac		
008	36°58'15.89" N	76°51'02.53"W	UT to Blackwater River	Farm 4 Production Fac		
009	36°58'09.16" N	76°50'52.16"W	UT to Blackwater River	Farm 5 Production Fac		
010	36°58'08.15" N	76°50'43.83"W	UT to Blackwater River	Farm 5 Production Fac		

Notes: * The visual inspection shall be made during normal working hours.
** No analytical tests are required to be performed on the samples.
*** Surface waters as defined in Attachment 12-Definition of Terms.

Best Management Practice(s) (BMPs) Monitoring:

Rationale: BMP Monitoring is required of the permittee by 9VAC25-31-200 E.1.f to identify appropriate site specific conservation practices to be implemented, including appropriate buffers or equivalent practices, to control runoff of pollutants to surface waters of the State.

Visual monitoring of the BMPs (identified in the permit application and the Farm Operating Manual) that are associated with the the outfalls listed in 15. above per the following table. The permit contains several conditions under which the monitoring shall be performed, including:

a. The BMPs shall be observed at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December and the observations shall be documented.

b. The visual inspection of the BMP(s) shall be performed in conjunction with storm water discharge sample examination events as required in Part I B.1. a., and

c. may be waived if adverse weather conditions prevent the visual inspection of the BMP(s) and are appropriately documented.

The Permittee shall correct any deficiencies found as a result of the visual inspections and document any actions taken to correct deficiencies. Deficiencies include failures of the BMP(s) that increase the probability of the contamination of water due to the exposure of the pollutants managed within the production area.

FEATURE TO BE MONITORED AND INSPECTED IN THE PRODUCTION AREA	MONITORING REQUIREMENTS
	Inspection Frequency *
Best Management Practices **: • as indicated in the Farm Operating Manual	Quarterly

Notes: * The visual inspection shall be made during normal working hours.
** Best management practice as defined in Attachment 12-Definition of Terms.

Monitoring of Other Features:

Rationale: Monitoring is required of the permittee by 9VAC25-31-30 (40 CFR 412). The federal effluent limitation guidelines require the permittee to inspect items such as waste storage structures and water lines for leaks or failures.

Visual monitoring of other features (listed in the table below) for leaks or failures that will increase the probability of the contamination of water due to exposure of pollutants managed within the production area shall be performed as specified below. The Permittee shall correct any deficiencies found as a result of the visual inspections and document any actions taken to correct deficiencies. Deficiencies include leaks from or failures of the features that will increase the probability of the contamination of water due to the exposure of the pollutants managed within the production area.

FEATURE TO BE MONITORED AND INSPECTED IN THE PRODUCTION AREA	MONITORING REQUIREMENTS Inspection Frequency *
Water lines: including drinking and cooling water lines	Daily
All waste** treatment or storage structures and the associated waste transfer system ***	Weekly
Storm water devices/structures: (including)**** • storm water diversion devices and runoff diversion structures, and • devices which channel contaminated storm water***** to any wastewater or manure treatment or storage structure • storm water***** and runoff channels which lead to the discharge points	Weekly Weekly

Notes: * The visual inspection shall be made during normal working hours.
** Waste as defined in Attachment 13-Definition of Terms.
*** The inspection shall record the level in liquid impoundments as indicated by a depth marker as required by Part II B.4.
**** Storm water diversion devices and runoff diversion structures as defined in Attachment 13-Definition of Terms.
***** Storm water as defined in Attachment 12-Definition of Terms.

Waste Monitoring:

Rationale: Sections 62.1-44.17:1 E 4 and 9VAC25-192-70 and 9VAC25-31-200 E 1. The specific waste monitoring requirements are stipulated by 9VAC25-192-70. Additionally, 9VAC25-31-200 E 1 requires the permittee to establish proper protocols to monitor waste.

Waste Monitoring shall be performed per the following table; additional waste monitoring may be required in the facility's approved Nutrient Management Plan, and analysis of the waste shall be according to methods specified in the facility's approved Nutrient Management Plan.

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			Frequency	Sample Type
Total Kjeldahl Nitrogen	NL	*	2/year	Composite
Ammonia Nitrogen	NL	*	2/year	Composite
Total Phosphorus	NL	*	2/year	Composite
Total Potassium	NL	*	2/year	Composite
Calcium	NL	*	2/year	Composite
Magnesium	NL	*	2/year	Composite
Moisture Content	NL	%	2/year	Composite

Notes: NL = No limit, this is a monitoring requirement only.
* Parameters for waste may be reported as a percent, as lbs/ton or lbs/1000 gallons, or as ppm where appropriate.

Soil Monitoring:

Rationale: Sections 62.1-44.17:1 E 4 and 9VAC25-192-70 and 9VAC25-31-200 E 1. The specific soils monitoring requirements are stipulated by 9VAC25-192-70. Additionally, 9VAC25-31-200 E 1 requires the permittee to establish proper protocols to monitor soils.

Soil monitoring at the land application sites shall be performed per the following table; additional soils monitoring may be required in the facility's approved Nutrient Management Plan. Soil monitoring shall be conducted at a depth of between 0-6 inches, unless otherwise specified in the facility's approved Nutrient Management Plan, and analysis of soil shall be according to methods specified in the facility's approved Nutrient Management Plan.

PARAMETER	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			Frequency	Sample Type
pH	NL	SU	1/3 years	Composite *
Phosphorus	NL	ppm or lbs/ac	1/3 years	Composite *
Potassium	NL	ppm or lbs/ac	1/3 years	Composite *
Calcium	NL	ppm or lbs/ac	1/3 years	Composite *
Magnesium	NL	ppm or lbs/ac	1/3 years	Composite *

Notes: NL = No limit, this is a monitoring requirement only.
SU = Standard Units
* Specific sampling requirements are found in the facility's approved Nutrient Management Plan.

Groundwater Monitoring:

Rationale: Sections 62.1-44.17:1 E 4 and 62.1-44.21 and 9VAC25-192-70 and 9VAC25-280-20 and 9VAC25-280-60. The specific ground water monitoring requirements are stipulated by 9VAC25-192-70. For 9VAC25-280-20: Except where otherwise specified, ground water quality standards shall apply statewide and shall apply to all ground water occurring at and below the uppermost seasonal limits of the water table. In order to prevent the entry of pollutants into ground water occurring in any aquifer, a soil zone or alternate protective measure or device sufficient to preserve & protect present and anticipated uses of ground watershall be maintained at all times. 9VAC25-280-60 Ground water criteria, although not mandatory, also provide guidance in preventing ground water pollution. Also, State Water Control Law 62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. Groundwater Monitoring for parameters of concern will indicate whether possible lagoon/pond seepage is resulting in violations to the State Water Control Board's Ground Water Standards.

The Permittee shall develop and submit a Groundwater Monitoring Plan for approval by the Department within 90 days of the effective date of this permit, and the Groundwater Monitoring Plan shall include at a minimum the following information:

(a) A site characterization report and other background data to support the alternative methods and practices to be used at the site,

(b) Procedures and monitoring protocols to ensure appropriate methods and practices are being utilized when monitoring groundwater

(c) Well design, installation protocol and proposed well locations including the completion of the Department's GW-2 form for each new well installed at the facility and baseline source discrimination geochemistry shall be completed on each new well,

(d) Sampling protocols including, but not limited to proposed parameters, frequency of monitoring, sample type, units of measure, well purging procedures prior to sampling, static well level measurements, etc,

(e) Procedures used to document the condition of the well screens including, but not limited to performing camera surveys of each well once every three years,

(f) Procedures used to document the condition of the waste storage or treatment facilities liner including, but not limited to a description of the leak detection technologies used to monitor the liner and the frequency of monitoring,

(g) Sampling and monitoring data evaluation methodology, including action levels that will trigger initiation of remedial actions;

(h) A proposed action plan to ensure appropriate measures are taken where,

(a) monitoring results demonstrate potential noncompliance with the permit,or

(b) a leak is detected during monitoring of the waste storage or treatment facility liner, and

(i) Well close out procedures for well abandonment.

Groundwater Monitoring shall be performed per the following table; new wells shall be monitored for the first year at a frequency of 1/month in order to establish baseline sampling data. After 12 consecutive samples where results indicate no exceedances of applicable groundwater criteria, the permittee may request a reduction in monitoring frequency to 1/3 months. After 4 consecutive quarterly samples where results indicate no exceedances of applicable groundwater criteria, the permittee may request a reduction in monitoring frequency to 2/year for the remainder of the permit term;

GROUNDWATER MONITORING

PARAMETER	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			Frequency	Sample Type
Static Water Level	NL	.01 ft	2/year *	Measured
Temperature	NL	°C/°F	2/year *	Grab
Turbidity	NL	NTU	2/year *	Grab
Ammonia Nitrogen	NL	mg/l	2/year *	Grab
Nitrate Nitrogen	NL	mg/L	2/year *	Grab
pH	NL	SU	2/year *	Grab
Conductivity	NL	umhos/cm	2/year *	Grab

Note: NL = No limit, this is a monitoring requirement only.

* see Part I.B.4.b.(4) above for new well monitoring frequency

Prior to sampling, wells shall be purged by either allowing a minimum of 3 well volumes to be removed or until well purging parameters (pH, temperature and conductivity) stabilize to plus or minus 10%.

Additional groundwater monitoring may be required in the facility's approved Nutrient Management Plan. The analysis of the groundwater shall be performed by a laboratory accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) in accordance with 1VAC30-46-20. The field sampling, testing and measurements, when performed at the site where the sample is taken, are not subject to the VELAP requirement.

18. **Recordkeeping Requirements:**

Rationale: Required by: § 62.1-44.17:1 E 4 and 9VAC25-192-70 and 9VAC25-31-100 J 1 and 40 CFR 412.37 (b) and (c). The specific recordkeeping requirements are required by 9VAC25-192-70. The Permittee shall maintain the information used to complete the permit application and the information collected per the preceding requirements in 17. (above), as well as the following information:

a. Any additional waste, soils or groundwater monitoring data collected during the life of this permit;
b. Records identified in the approved Farm Operating Manual that will be maintained to document the implementation and management of the items in the Manual;
c. Land application records;
d. Records documenting the current design of any manure storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity;
e. The date, time, and estimated volume of any overflow from a manure or waste storage structure (In the event that an overflow occurs, the Permittee must report the overflow to the Department and report all occurrences in the annual report), and
f. Methods of mortality management and practices used to prevent the discharge of pollutants to surface water

The records listed above shall be retained at the facility for a period of five years from the date the records are created and made available to Department personnel upon request.

19. **Reporting Requirements:**

Rationale: 9VAC25-31-200 E 4.The specific reporting requirements are required by 9VAC25-31-190.L. The Permittee shall submit an annual report to the director by February 15 of each year for the previous calendar year or part thereof since covered by this permit. The annual report shall be submitted on a form provided by the Department or in a comparable format and include the following information:

a. The number and type of animals, whether in open confinement or housed under roof;

b. Estimated amount of total manure and process generated by the facility in the previous 12 months (tons/gallons);

c. Estimated amount of total manure and process wastewater transferred to other persons by the Permittee in the previous 12 months (tons/gallons);

d. Total number of acres for land application covered by the facility's approved Nutrient Management Plan;

e. Total number of acres under control of the Permittee that were used for land application of manure and process wastewater in the previous 12 months;

f. Summary of all manure and process wastewater discharges from the production area that entered or could have been expected to enter state waters in the previous 12 months, including date, time, and approximate volume; cause of discharge and corrective action taken or to be taken to address the cause of the discharge;

g. A statement indicating that the current version of the facility's Nutrient Management Plan was developed by a Department of Conservation and Recreation (DCR) certified Nutrient Management Planner and approved by the DCR;

h. Any other results of monitoring, land application or records generated as described in 18. (above)

20. STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS AND SPECIAL CONDITIONS:
(Check all which are appropriate)

X	State Water Control Law
X	Clean Water Act
X	VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
X	EPA NPDES Regulation (Federal Register)
	EPA Effluent Guidelines (40 CFR 133 or 400 - 471)
X	Water Quality Standards (9 VAC 25-260-5 et seq.)
	Wasteload Allocation from a TMDL or River Basin Plan

21. EFFLUENT LIMITATIONS/MONITORING: Provide all limitations and monitoring requirements being placed on each outfall.

SEE TABLE II - ATTACHMENT 5

22. EFFLUENT LIMITATIONS/MONITORING RATIONALE: Attach any analyses of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic and human health); effluent limitations determination; input data listing. Include all calculations used for each outfall and set of effluent limits and those used in any model(s). Include all calculations/documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for limiting internal waste streams and indicator pollutants. Attach chlorine mass balance calculations, if performed. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

DEQ Regional and Central Office staff discussed the naturally low dissolved oxygen in the receiving stream and whether dissolved oxygen monitoring was appropriate in the permit for the storm water outfalls. Because of the expected nature of the storm water at the facility (storm water not contaminated by process activities, not combined with other wastewaters and not held in the storm water ponds for an extended period), staff felt dissolved oxygen monitoring was not necessary at this time. Future DEQ inspections will focus on confirming the conditions on which this determination is based. If future inspections determine that the nature of the storm water is not as described, dissolved oxygen monitoring on the storm water outfalls may be considered.

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested variances or alternatives to required permit conditions/limitations. This includes, but is not limited to: waivers from testing requirements; variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions.

N/A

SUITABLE DATA: In what, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

No suitable effluent data available for review.

ANTIDEGRADATION REVIEW: Provide all appropriate information/calculations for the antidegradation review.

The receiving stream has been classified as tier 1; therefore, no further review is needed. Permit limits have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

There are no backsliding issues to address in this permit as this is a new issuance.

23. **SPECIAL CONDITIONS RATIONALE:** Provide a rationale for each of the permit's special conditions.

SEE ATTACHMENT 6

24. **TOXICS MONITORING/TOXICS REDUCTION AND WET LIMIT SPECIAL CONDITIONS RATIONALE:** Provide the justification for any toxics monitoring program and/or toxics reduction program and WET limit.

N/A

25. **SLUDGE DISPOSAL PLAN:** Provide a description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.

Lagoon sludge handling procedures will be addressed in the Farm Operating Manual.

26. **MATERIAL STORED:** List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching State waters.

None

27. **RECEIVING WATERS INFORMATION:** Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260-5 et seq.). **Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied.** Attach any memoranda or other information which helped to develop permit conditions (i.e. tier determinations, PReP complaints, special water quality studies, STORET data and other biological and/or chemical data, etc.

OUTFALL NUMBER	Latitude	Longitude	Name of Nearest Potential Receiving Stream	Area Contributing Flow
001	36°58'37.87" N	76°50'48.91"W	UT to Blackwater River	Farm 1 Production Facility
002	36°58'40.66" N	76°50'.35.85"W	UT to Blackwater River	Farm 1 Production Facility
003	36°58'21.66" N	76°50'.46.51"W	UT to Blackwater River	Farm 2 Production Facility
004	36°58'31.07" N	76°50'54.58"W	UT to Blackwater River	Farm 2 Production Facility
005	36°58'24.06" N	76°50'58.56"W	UT to Blackwater River	Farm 2 Production Facility
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007	36°57'56.08" N	76°50'49.92"W	UT to Blackwater River	Farm 3 Production Facility
008	36°58'15.89" N	76°51'02.53"W	UT to Blackwater River	Farm 4 Production Facility
009	36°58'09.16" N	76°50'52.16"W	UT to Blackwater River	Farm 5 Production Facility
010	36°58'08.15" N	76°50'43.83"W	UT to Blackwater River	Farm 5 Production Facility

Each outfall receives prior secondary containment BMP/visual observation. Storm water runoff is collected in one of ten secondary containment basins (grass covered earthen structures that collect runoff from production area). Each BMP is inspected daily to ensure that there are no visible contaminants prior to being released by gate valve to the receiving stream. Additional BMPs include nutrient mgt.plan, buffers, setbacks, conservation tillage and grass filter strips.

28 305(b)/**303(d) Listed Segments**: Indicate if the facility discharges to a segment that is listed on the current 303(d) list and, if so, provide all appropriate information/calculations.

This facility discharges directly to an **unnamed tributary to the Blackwater River (outfalls 001, 002, 003, 006, 007, 009 and 010)**. This receiving stream segment has been listed in Category 5 of the 305(b)/303(d) list for non-attainment of mercury in fish tissue (consumption advisory). A TMDL has not been prepared or approved for this stream segment. The permit contains a TMDL reopener clause which will allow the it to be modified, in compliance with Section 303(d)(4) of the Act once a TMDL is approved.

This facility's outfalls **004, 005 and 008 discharges directly to the Blackwater River via agriculture ditches.** This receiving stream segment has been listed in Category 5 of the 305(b)/303(d) list for impairment of D.O. and benthics, a result of natural conditions. The stream will remain listed as impaired in Category 4C (natural and not needing a TMDL for D.O.) until a Class VII D.O. standard is set for the Blackwater River.

SEE ATTACHMENT 7

29. CHANGES TO PERMIT: Use **TABLE III(a)** to record any changes from the previous permit and the rationale for those changes. Use **TABLE III(b)** to record any changes made to the permit during the permit processing period and the rationale for those changes [i.e., use for comments from the applicant, VDH, EPA, other agencies and/or the public where comments resulted in changes to the permit limitations or any other changes associated with the special conditions or reporting requirements].

SEE ATTACHMENT 8

30. NPDES INDUSTRIAL PERMIT RATING WORKSHEET:

TOTAL SCORE: 10 **SEE ATTACHMENT 9**

31. DEQ PLANNING COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from DEQ planning.

The discharge is not addressed in any planning document but will be included when the plan is updated.

32. PUBLIC PARTICIPATION: Document comments/responses received during the public participation process. If comments/responses provided, especially if they result in changes to the permit, place in the attachment.

VDH/DSS COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the Virginia Dept. of Health and the Div. of Shellfish Sanitaiton and noted how resolved.

By letter dated April 25, 2014, the VDH provided the following comments:

There are no public water supply intakes located within 15 miles downstream or within one tidal cycle upstream of the discharge.

The DSS has no comments on the application/draft permit (see page 10b)

EPA COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the U.S. Environmental Protection Agency and noted how resolved.

EPA has no objections to the adequacy of the draft permit.

ADJACENT STATE COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from an adjacent state and noted how resolved.

Not Applicable.

OTHER AGENCY COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from any other agencies (e.g., VIMS, VMRC, DGIF, etc.) and noted how resolved.

Not Applicable.

OTHER COMMENTS RECEIVED FROM RIPARIAN OWNERS/CITIZENS ON DRAFT PERMIT: Document any comments received from other sources and note how resolved.

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation, and no comments were received.

PUBLIC NOTICE INFORMATION: Comment Period: Start Date
End Date

Persons may comment in writing or by e-mail to the DEQ on the proposed issuance of the permit within 30 days from the date of the first notice. Address all comments to the contact person listed below. Written or e-mail comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The Director of the DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requestor's interests would be directly and adversely affected by the proposed permit action.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Robert Smithson at: Department of Environmental Quality (DEQ), Tidewater Regional Office, 5636 Southern Boulevard, Virginia Beach, VA 23462. Telephone: 757-518-2106 E-mail: resmithsonjr@deq.virginia.gov

Following the comment period, the Board will make a determination regarding the proposed issuance. This determination will become effective, unless the Director grants a public hearing. Due notice of any public hearing will be given.

33. **ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:**

For the permit action addressed by this fact sheet, this facility has been assigned the following classification for the purposes of determination of applicable permit processing and permit maintenance fees: LARGE CAFO FACILITY; INDUSTRIAL MINOR-NO STANDARD LIMITS.

Sanitary wastes from the employees are directed to a separate septic drain field.

This permit does not include a TMP.

This facility has no external process wastewater outfalls. It has ten storm water valved outfalls that receive settling via a secondary containment basin/visual observation prior to discharge.

In accordance with §62.1-44.15:01.A.2 , 9VAC25-31-290.G.2 and GM11-005, a copy of the public notice for this permit was mailed to the Regional Planning District Commissions and local County officials.

ATTACHMENT 1

SITE INSPECTION REPORT/MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

ANIMAL FEEDING OPERATIONS
Inspection Checklist

General Information

Permit Number: VPA01074 County/City: Isle of Wight

Date of Permit Coverage: May 9, 2001(Continued)

Facility Name: Farms 1-5 (Proctor's Bridge)

Owner: Carroll's Foods Of VA, Inc. (Murphy-Brown)

Address: P.O. Box 1240 Phone: (804) 834-2109

Waverly, VA 23890 Cell: (804)

Farm Location: 12520 Mill Swamp Rd.

Inspection Scheduled: [X] Yes [ ] No

Inspection Announced: [X] Yes [ ] No

Inspection Date/Time: March 13, 2014@ 9:30 Photos taken? [X] Yes [ ] No

Inspector: Clyde Gantt Certification Number: 563

Reviewed By/Date: Kenneth T. Raum / 03-20-14 KTR

Others Present: Mr. Jeff Francis – Complex Manager

Type Livestock: Swine: [ ] Farrow [ ] Feeder [X] Finish [ ] Sow/Farrow to Finish

Number Confined: At Inspection 40,000 Reg. Statement 5000* NMP 52,500
*The registration statement was for the previous farrow to finish operation. This farm is now a finishing operation only.

Number of Housing Units: Each farm site has 13 X finishing houses.

DCR Training completed: [X] Yes [ ] No Date: March 26, 2010

Comments / General Summary: Farm #4 is currently not in use. All documents were available and up to date. No problems noted.

Murphy-Brown Farms 1-5 VPA01074

Inspection Summary Sheet

Permit #VPA01074

Items requiring action:	Corrective action needed:	Expected Completion Date:
1. None		
2.		

Recommendations
1. None – No problems noted.
2.

Comments:

Murphy-Brown Farms 1-5 VPA01074

Feeding and Waste Storage Facilities -- Swine

Perimeter of housing units clear of vegetation: [X] Yes [ ] No
Evidence of leaks or overflow from housing units: [ ] Yes [X] No
Which housing units?

Type of waste collection system: [ ] Pull Plug [X] Recirculation [ ] Sump
[ ] Flush gutter [ ] Floor Over Pit [ ] Other _____

Method of carcass disposal: [ ] Burial [ ] Incineration [X] Rendering

Type of waste storage facilities: [X] Lagoon [ ] Pit [ ] Slurry Store
[ ] Other_

Observed Freeboard (in):

Storage #1P	24"	Evidence of Overflow: [ ]Yes	[X] No
Storage #1S	48"	Evidence of Overflow: [ ]Yes	[X] No
Storage #2P	22"	Evidence of Overflow: [ ]Yes	[X] No
Storage #3P	21"	Evidence of Overflow: [ ]Yes	[X] No
Storage #4P	21"	Evidence of Overflow: [ ]Yes	[X] No
Storage #5P	27"	Evidence of Overflow: [ ]Yes	[X] No
Storage #5S	60"	Evidence of Overflow: [ ]Yes	[X] No

Adequate vegetative cover on earthen berms:	[X]Yes	[ ] No	[ ] N/A
Visible marker for max/min operating levels:	[X]Yes	[ ] No	[ ] N/A
Trees/brush on berm:	[ ]Yes	[X] No	[ ] N/A
Evidence of erosion on berm:	[ ]Yes	[X] No	[ ] N/A
Evidence of burrowing animals:	[ ]Yes	[X] No	[ ] N/A

General Condition of Feeding and Waste Storage Facilities: The facilities were generally in good condition.

Monitoring Requirements

WASTE

Monitored in accordance with required frequency: [X] Yes [ ] No Freq. 2/Year
Sample(s) Collected By: Complex Manager or staff
Analyzed by: Clemson Univ. Date(s): Sept. 26, 2013

Proper Composite Sample Collected: [X] Yes [ ] No
Waste analyses attached: [ ] Yes [X] No
Waste Nutrient Value (N - P_2O_5 - K_2O):

Type: Swine Manure Lagoon 1S
Surface Application: 0.75 – 0.80 – 6.89 (lbs./1000gals)

Type: Swine Manure Lagoon 5S
Surface Application: 1.13 – 1.11 – 5.75 (lbs./1000gals)

SOILS

Monitored in accordance with required frequency: [X] Yes [ ] No Freq. 1 / Year
Sample(s) Collected By: Complex Manager or staff
Analyzed By: VA Tech, A&L Eastern Labs Date: Dec. 18, 2013

Proper Compositing Protocol Used: [X] Yes [ ] No
Samples Collected from each Field: [X] Yes [ ] No
Are pHs in Agronomic Range for Intended Crops: [X] Yes [ ] No

GROUNDWATER [X] Required - Complete Groundwater Monitoring Sheet [ ] N/A

Water Withdrawal Reporting: [X] Yes [ ] No
[ ] N/A (< 10,000gpd)

Comments: Extensive groundwater data submitted in quarterly reports.

Murphy-Brown Farms 1-5 VPA01074

Nutrient Management Plan (NMP)

NMP Approval Date: February 21, 2013
Planner: R.O. Britt (Murphy – Brown) Phone: (804) 640-5521

Copy of Approved NMP Available: [X] Yes [ ] No
Is NMP Current (update 1/3 years): [X] Yes [ ] No
(1/5 yrs. for some waste transfer only plans)
NMP Animal Units Exceeded: [ ] Yes [X] No

Waste Application Method: [X] Traveling Gun [X] Solid Set [X] Center Pivot
[ ] Liquid Spreader [ ] Dry Manure Spreader [ ] Other _____

Date of Last Calibration: 5/29/13
Method of Calibration: Flow Meter/Time

Field Application Records Maintained: [X] Yes [ ] No

Following information provided in records:

Crop:	[X] Yes	[ ] No	Date(s) Applied:	[X] Yes	[ ] No
Incorporation & type:	[X] Yes	[ ] No	Rate(s) Applied:	[X] Yes	[ ] No
Supp. Fert. Applied:	[ ] Yes	[ ] No	[X] N/A		
Lime Applied:	[ ] Yes	[ ] No	[ ] N/A		

Applications comply with seasonal spreading schedule: [X] Yes [ ] No

Land application performed on targeted fields: [X] Yes [ ] No
If no, adjustments made according to NMP Standards & Criteria [ ] Yes [ ] No

NMP Application Notes Followed: [X] Yes [ ] No [ ] N/A
(Maximum application rates, cutting schedule, etc.)

Yields In Approximate Range Provided by NMP: [X] Yes [ ] No

Compliance with Other NMP Conditions: [X] Yes [ ] No [ ] N/A

Comments:

Murphy-Brown Farms 1-5 VPA01074

Application Field Data Sheet

NRCS Tract #: 67 Field #: 1078
Field Name: H Gross Acres: 8.52 Usable Acres: 8.52

Crop - Current: Rye Cover Previous: Sorghum Grain Next: Corn
Crop Condition: [ ] Poor [X] Average [ ] Good [ ] N/A (Harvested)
Crops Harvested and Utilized [X] Yes [ ] No [ ] N/A (Cover crop)

Application Rate based on: [ ] Long term average [X] Most recent analysis

Crop	Date Planted	Manure App. Date	Rate / ac	Amount applied	Incorporation Yes/ No	Yield
See Attached Spread Sheet						
Sorghum	6/1/13	Various	117 KGal	1 MG	No	25.0 Bu/Ac

Nutrients from Waste (lbs./ac): 30 – 31 – 377
Supplemental Nutrients (lbs./ac): 0 – 0 – 0
Total Nutrients to Field (lbs./ac): 30 – 31 – 377
NMP Allowable Loading (lbs./ac): 110 – 30 – 0

Field Conditions
Evidence of Buffers Breached by Waste: [ ] Yes [X] No
Evidence of Runoff/Erosion: [ ] Yes [X] No

Comments: This field is N limited due to P-Index calculation. This field is also environmentally sensitive due to high leaching and tile drains. No problems noted. The yield was 25% of the projected yield.

Murphy-Brown Farms 1-5 VPA01074

Application Field Data Sheet

NRCS Tract #: 67 Field #: 1078
Field Name: I Gross Acres: 2.89 Usable Acres: 2.89

Crop - Current: Rye Cover Previous: Sorghum Grain Next: Corn
Crop Condition: [ ] Poor [X] Average [ ] Good [ ] N/A (Harvested)
Crops Harvested and Utilized [X] Yes [ ] No [ ] N/A (Cover crop)

Application Rate based on: [ ] Long term average [X] Most recent analysis

Crop	Date Planted	Manure App. Date	Rate / ac	Amount applied	Incorporation Yes/ No	Yield
See Attached Spread Sheet						
Sorghum	9/1/10	Various	172 K Gal	0.5 K Gal	No	25.3 Bu/Ac

Nutrients from Waste (lbs./ac): 48 – 44 – 499
Supplemental Nutrients (lbs./ac): 0 – 0 – 0
Total Nutrients to Field (lbs./ac): 48 – 44 – 499
NMP Allowable Loading (lbs./ac): 110 – 30 – 80

Field Conditions
Evidence of Buffers Breached by Waste: [ ] Yes [X] No
Evidence of Runoff/Erosion: [ ] Yes [X] No

Comments: This field is N limited based on P-Index calculation. No problems noted. The yield was 23.6% of the projected yield.

Murphy-Brown Farms 1-5 VPA01074

Application Field Data Sheet

NRCS Tract #: 67 Field #: 1078
Field Name: J Gross Acres: 3.74 Usable Acres: 3.74

Crop-Current: Bermuda Grass Hay Previous: Bermuda Grass Hay Next: Bermuda Hay
Crop Condition: [ ] Poor [X] Average [ ] Good [ ] N/A (Harvested)
Crops Harvested and Utilized [X] Yes [ ] No [ ] N/A (Cover crop)

Application Rate based on: [ ] Long term average [X] Most recent analysis

Crop	Date Planted	Manure App. Date	Rate KGal / ac	Amount applied	Incorporation Yes/ No	Yield
See Attached Spread Sheet						
Hay	3/1/10	Various	130	.487 MG	No	4.1 T/Ac

Application Rate (1000s' gal/ac.) 130
Nutrients from Waste (lbs./ac): 45 – 32 – 388
Supplemental Nutrients (lbs./ac): 0 – 0 – 0
Total Nutrients to Field (lbs./ac): 45 – 32 – 388
NMP Allowable Loading (lbs./ac): 270 – 0 – 165

Field Conditions
Evidence of Buffers Breached by Waste: [ ] Yes [X] No
Evidence of Runoff/Erosion: [ ] Yes [X] No

Comments: This field is N limited based on P-Index calculation. No problems noted. The yield was 101% of the projected yield.

Murphy-Brown Farms 1-5 VPA01074

Application Field Data Sheet

NRCS Tract #: 2111 Field #: 7
Field Name: 2SP2 Gross Acres: 4.99 Usable Acres: 4.99

Crop - Current: Wheat Grain Previous: Corn Next: Sorghum
Crop Condition: [ ] Poor [X] Average [ ] Good [ ] N/A (Harvested)
Crops Harvested and Utilized [X] Yes [ ] No [ ] N/A (Cover crop)

Application Rate based on: [ ] Long term average [X] Most recent analysis

Crop	Date Planted	Manure App. Date	Rate / ac	Amount applied	Incorporation Yes/ No	Yield
See Attached Spread Sheet						
Hay	3/1/13	Various	198 Kgal/Ac	0.99 MG	No	?

Application Rate (1000s' gal/ac.) 198
Nutrients from Waste (lbs./ac): 172 – 53 – 546
Supplemental Nutrients (lbs./ac): 0 – 0 – 0
Total Nutrients to Field (lbs./ac): 172 – 53 – 546
NMP Corn Allowable Loading (lbs./ac): 150 – 60 – 100

Field Conditions
Evidence of Buffers Breached by Waste: [ ] Yes [X] No
Evidence of Runoff/Erosion: [ ] Yes [X] No

Comments: This field is N limited based on P-Index calculation. No problems noted. Assuming three hay cuttings, the yield is what is estimated in the Standards & Criteria.

Smithfield Carrolls Farms 1-5 VPA01074

MURPHY-BROWN (PROCTOR'S BRIDGE)
VPA01074
CROP YEAR 2013/2014 NUTRIENT LOAD CALCULATIONS - FIELD H

SORGUM

DATE	Gal Applied	KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac
6/2/13	59,760	7.01	5.26	1.75	23
6/21/13	48,240	5.66	1.25	1.53	18
6/26/13	59,760	7.01	1.54	1.89	23
7/8/13	44,820	5.26	1.16	1.42	17
7/17/13	44,820	5.26	1.16	1.21	11
7/19/13	44,820	5.26	1.16	1.42	17
7/22/13	48,240	5.66	1.25	1.53	18
7/23/13	86,940	10.20	2.24	2.76	33
7/24/13	104,400	12.25	2.70	3.31	40
8/10/13	57,270	6.72	1.48	1.81	22
8/14/13	124,080	14.56	3.20	3.93	47
8/15/13	42,120	4.94	1.09	1.33	16
8/16/13	62,040	7.28	1.60	1.97	24
8/23/13	93,060	10.92	2.40	2.95	36
8/28/13	80,400	9.44	2.08	2.55	31
	1,000,770	117	30	31	377
	Crop Year Totals	KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac

3/18/13 CG

Smithfield Carrolls Farms 1-5 VPA01074

MURPHY-BROWN (PROCTOR'S BRIDGE)
VPA01074
CROP YEAR 2013 NUTRIENT LOAD CALCULATIONS - FIELD I

SORGUM GRAIN

DATE	Gal Applied	KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac
6/1/13	56,400	19.52	14.64	4.88	64
6/17/13	42,300	14.64	3.22	3.95	48
6/20/13	28,200	9.76	2.15	2.24	20
6/29/13	42,300	14.64	3.22	3.37	31
7/8/13	42,300	14.64	3.22	3.37	31
7/11/13	42,300	14.64	3.22	3.37	31
7/19/13	42,300	14.64	3.22	3.95	48
7/24/13	56,400	19.52	4.29	5.27	64
8/14/13	42,300	14.64	3.22	3.95	48
8/23/13	59,925	20.74	4.56	5.60	68
8/28/13	42,300	14.64	3.22	3.95	48
	497,025	172	48	44	499
	Crop Year Totals	KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac

3/18/13 CG

MURPHY-BROWN (PROCTOR'S BRIDGE)
VPA01074
CROP YEAR 2013 NUTRIENT LOAD CALCULATIONS - FIELD J

BERMUDA HAY

DATE	Gal Applied	KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac
5/31/13	25,800	6.90	17.87	2.00	23
6/1/13	38,700	10.35	2.28	2.79	33
6/17/13	38,700	10.35	2.28	2.38	22
7/5/13	38,700	10.35	2.28	2.79	22
7/11/13	38,700	10.35	2.28	2.38	34
7/17/13	38,700	10.35	2.28	2.79	22
7/23/13	35,475	9.49	2.09	2.18	31
7/24/13	51,600	13.80	3.04	3.17	45
8/14/13	38,700	10.35	2.28	2.38	34
9/4/13	51,600	13.80	3.04	3.17	45
9/9/13	51,600	13.80	3.04	3.17	45
9/12/13	38,700	10.35	2.28	2.79	34
	486,975	130	45	32	388
	Crop Year Totals	KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac

3/18/13 CG

MURPHY-BROWN (PROCTOR'S BRIDGE)
VPA01074
CROP YEAR 2013 NUTRIENT LOAD CALCULATIONS - FIELD S2P2
CORN - GRAIN

DATE	Gal Applied	KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac	
5/29/2013	135,000	27.054	7.01	7.85	85	
5/31/2013	127,500	25.55	66.18	7.41	81	
6/17/2013	105,000	21.04	54.50	6.10	66	
6/25/2013	105,000	21.04	4.63	4.84	44	Corn
7/8/2013	120,000	24.05	5.29	5.53	51	
7/19/2013	105,000	21.04	4.63	4.84	44	
7/20/2013	37,500	7.52	1.65	1.73	16	
7/30/2012	150,000	30.06	27.66	14.43	159	
		177	172	53	546	
Crop Totals		KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac	
10/2/2013	105,000	21.04	23.78	23.36	121	Wheat Grain
		198	195	76	667	
Crop Year Totals		KGal/Acre	PAN lbs/ac	PAP lbs/ac	K lbs/ac	

3/18/14 CG

ATTACHMENT 2

DISCHARGE LOCATION/TOPOGRAPHIC MAP

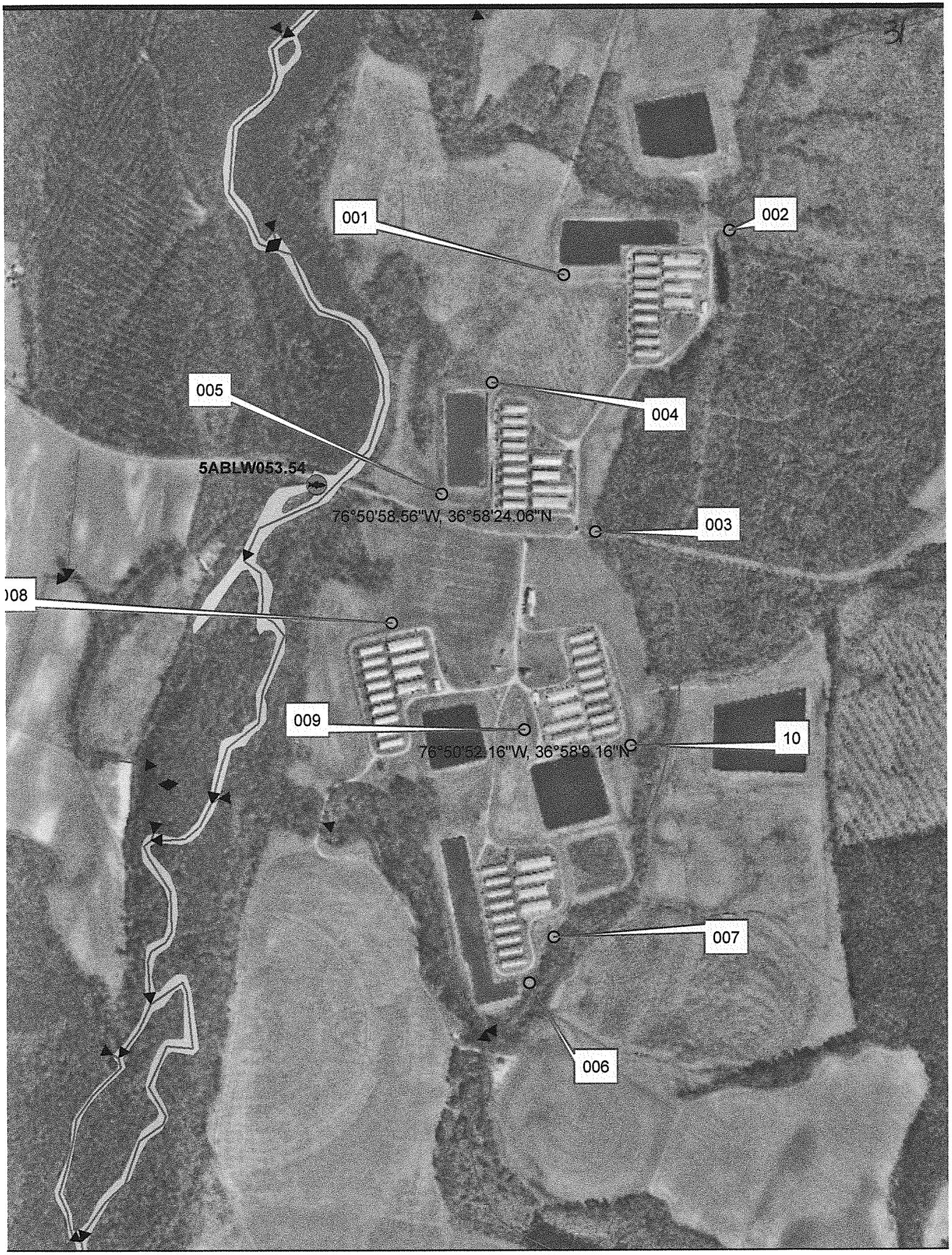
ENT OF THE INTERIOR
LOGICAL SURVEY

Murphy Brown Farms 1-5

Raynor Topo
37A

DIVISION OF MIN
JAMES L. CALVER,

30


001
002
004
005
5ABLW053.54
76°50'58.56"W, 36°58'24.06"N
003
008
009
76°50'52.16"W, 36°58'9.16"N
10
007
006

MB Farms 1-5 (Proctors Bridge)

V. DISCHARGE POINT AND BEST MANAGEMENT PRACTICES (BMPs) RELATED TO A DISCHARGE POINT

For each discharge point, provide the following information in the table below:

a) a descriptive name of the discharge point;
b) the latitude and longitude of its location;
c) the name of the nearest potential receiving water;
d) all areas contributing manure, litter, process wastewater, or storm water from the facility; and
e) the treatment received or BMPs utilized, installed or constructed prior to the discharge point.

For DEQ Use - I.D. Number	Discharge Point	Latitude	Longitude	Name of Nearest Potential Receiving Water	Area Contributing Flow	Treatment or BMPs
	001	36°58'37.87" N	76°50'48.91" W	Unnamed tributary to Blackwater River	Production Facility – Farm 1	Secondary Containment
	002	36°58'40.66" N	76°50'35.85" W	Unnamed tributary to Blackwater River	Production Facility – Farm 1	Secondary Containment
	003	36°58'21.66" N	76°50'46.51' W	Unnamed tributary to Blackwater River	Production Facility – Farm 2	Secondary Containment
	004	36°58'31.07" N	76°50'54.58" W	Unnamed tributary to Blackwater River	Production Facility – Farm 2	Secondary Containment
	005	36°58'24.06" N	76°50'58.56" W	Unnamed tributary to Blackwater River	Production Facility – Farm 2	Secondary Containment
	006	36°57'53.18" N	76°50'51.84" W	Unnamed tributary to Blackwater River	Production Facility – Farm 3	Secondary Containment
	007	36°57'56.08" N	76°50'49.92" W	Unnamed tributary to Blackwater River	Production Facility – Farm 3	Secondary Containment

	008	36°58'15.89" N	76°51'02.53" W	Unnamed tributary to Blackwater River	Production Facility – Farm 4	Secondary Containment
	009	36°58'09.16" N	76°50'52.16" W	Unnamed tributary to Blackwater River	Production Facility – Farm 5	Secondary Containment
	010	36°58'08.15" N	76°50'43.83" W	Unnamed tributary to Blackwater River	Production Facility – Farm 5	Secondary Containment

VI. BEST MANAGEMENT PRACTICES (BMPs)

A. BMPs are utilized, installed or constructed for each of the areas listed in Section V above. X Yes ☐ No

B. If no, please explain: _____

C. Attach to this Addendum, a description of the BMPs listed above in Section V or a copy of the Farm Operating Manual (if already developed). *The attached copy may be a hard copy or an electronic copy.*

VII. OTHER ATTACHMENTS (see instructions for requirements)

A. The completed and signed Local Government Ordinance Form (LGOF) is attached: ? Yes ? No X On file with DEQ

B. A copy of the Department of Conservation and Recreation (DCR) Nutrient Management Plan (NMP) approval letter is attached: X Yes ? No

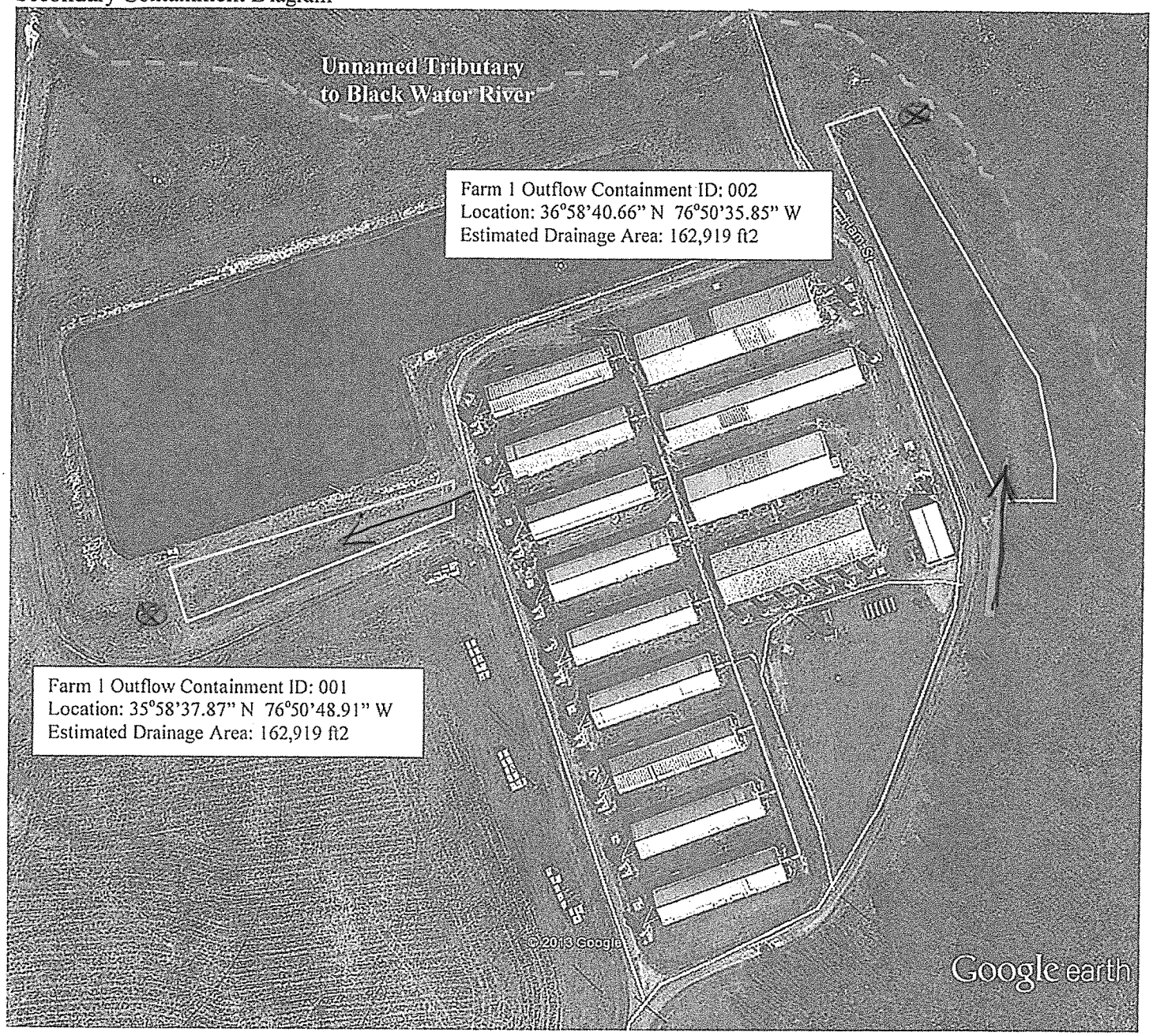
VIII. CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: Kraig Westerbeek Official Title: *Assistant Vice President of Environment, Health, & Safety*

Signature: _____ Date: 4/15/2014

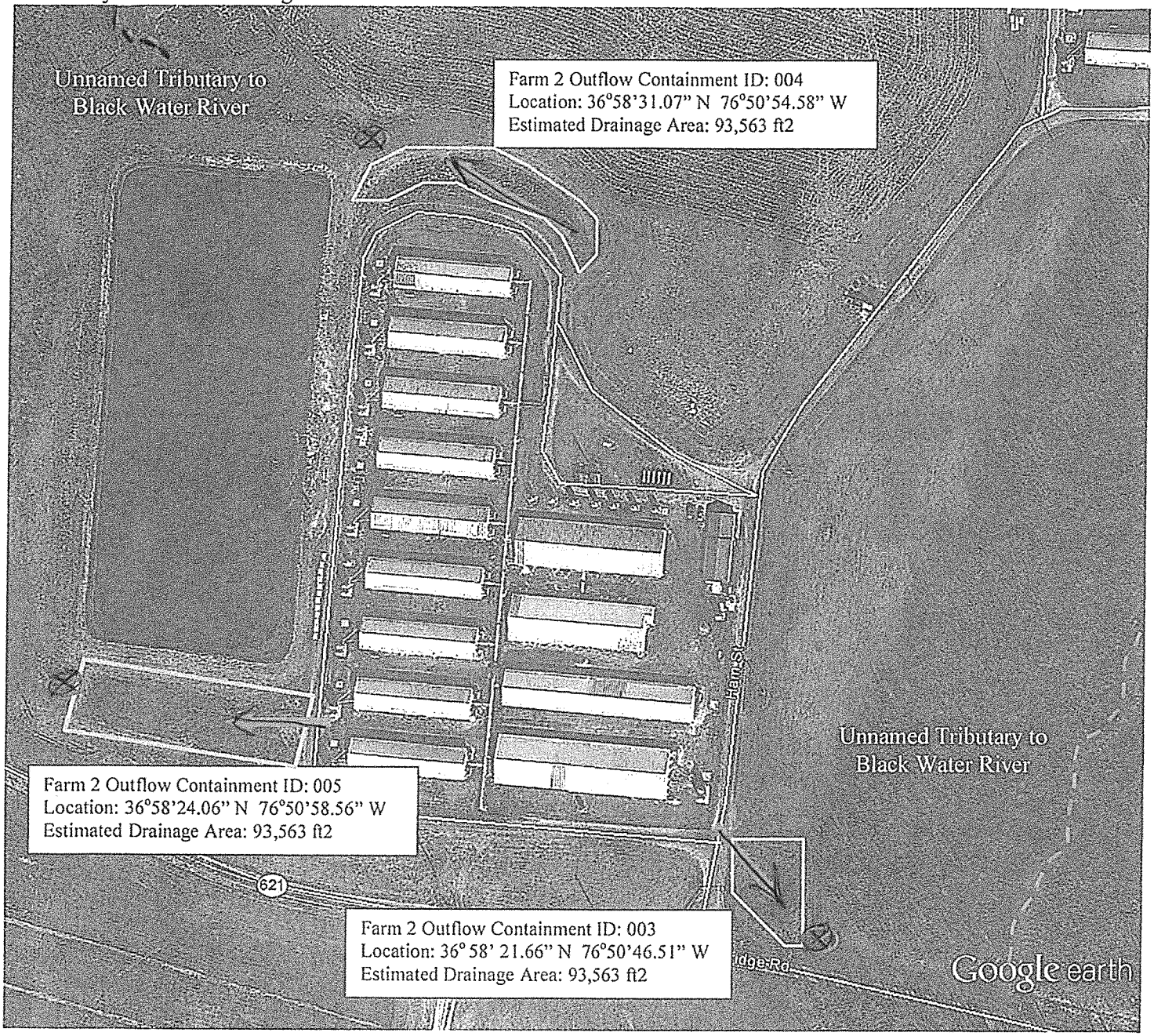
Murphy-Brown LLC
Farm 1 – Proctors Bridge
Secondary Containment Diagram



Key

Secondary Containment Location	Intermittent Stream
Containment Valve	
Inlet & Direction of Surface Water Flow	

Murphy-Brown LLC
Farm 2 – Proctors Bridge
Secondary Containment Diagram



Key

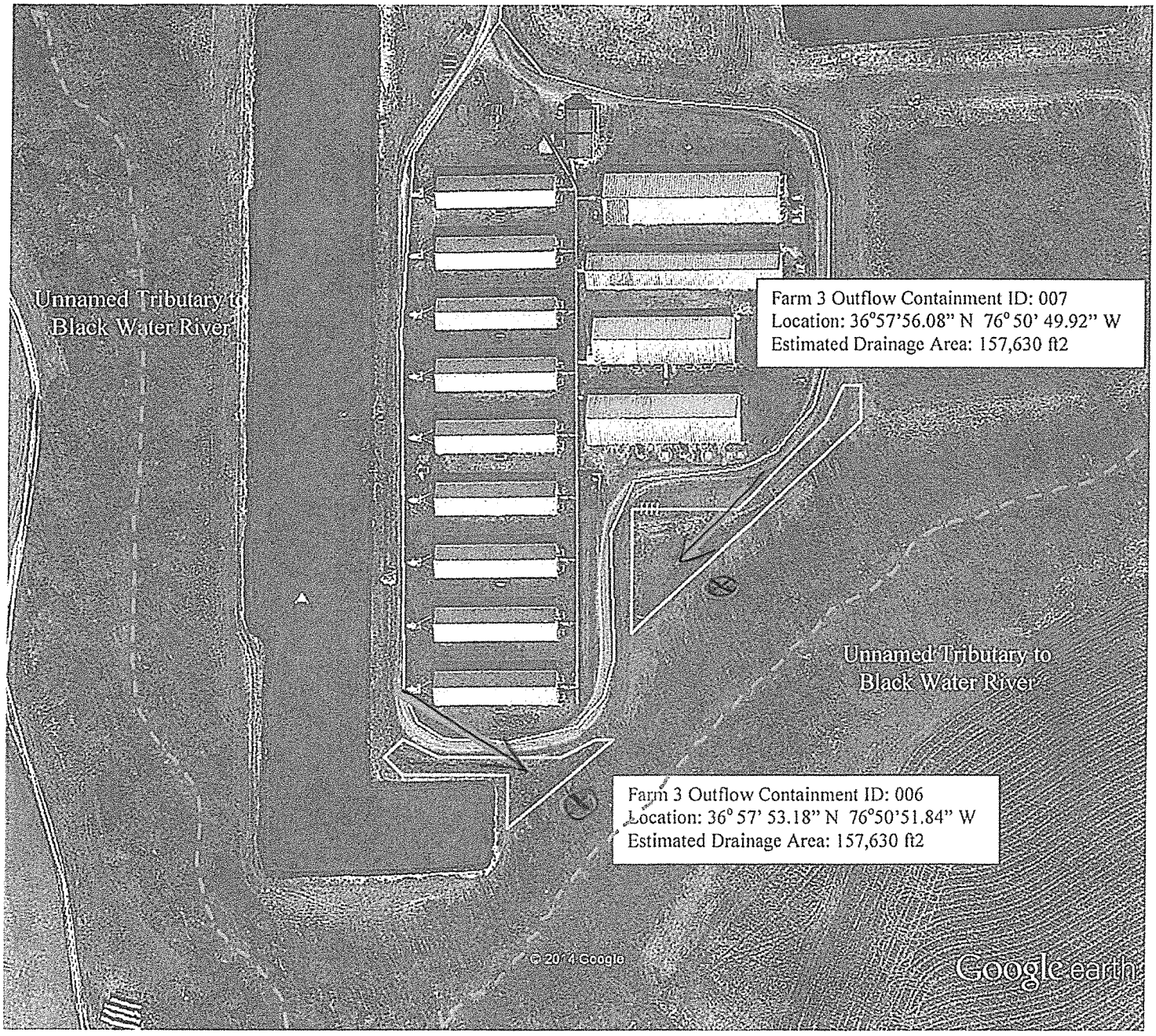
Secondary Containment Location

Containment Valve

Inlet & Direction of Surface Water Flow

Intermittent Stream

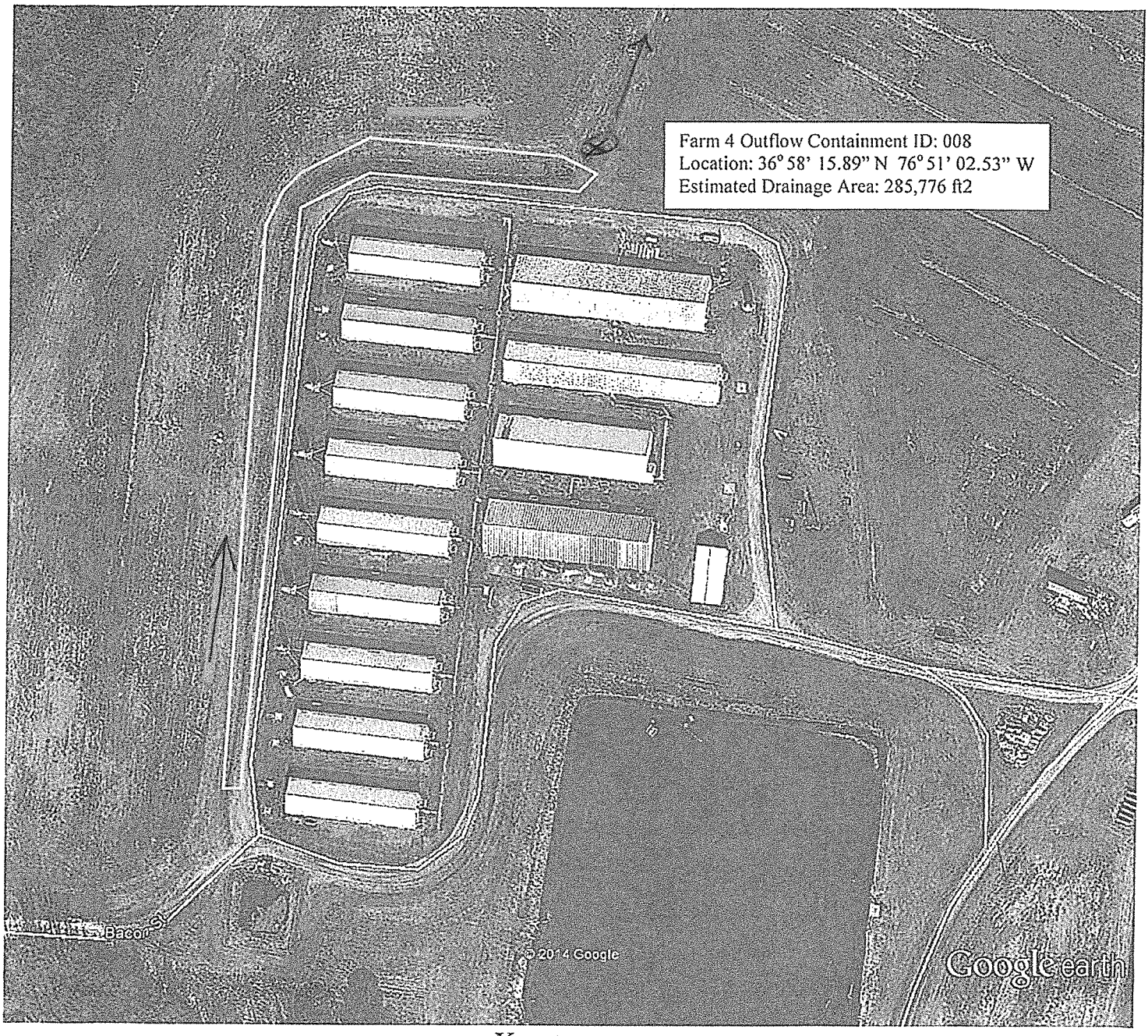
Murphy-Brown LLC
Farm 3 – Proctors Bridge
Secondary Containment Diagram



Key

Secondary Containment Location	Intermittent Stream
Containment Valve	
Inlet & Direction of Surface Water Flow	

Murphy-Brown LLC
Farm 4 – Proctors Bridge
Secondary Containment Diagram



Key

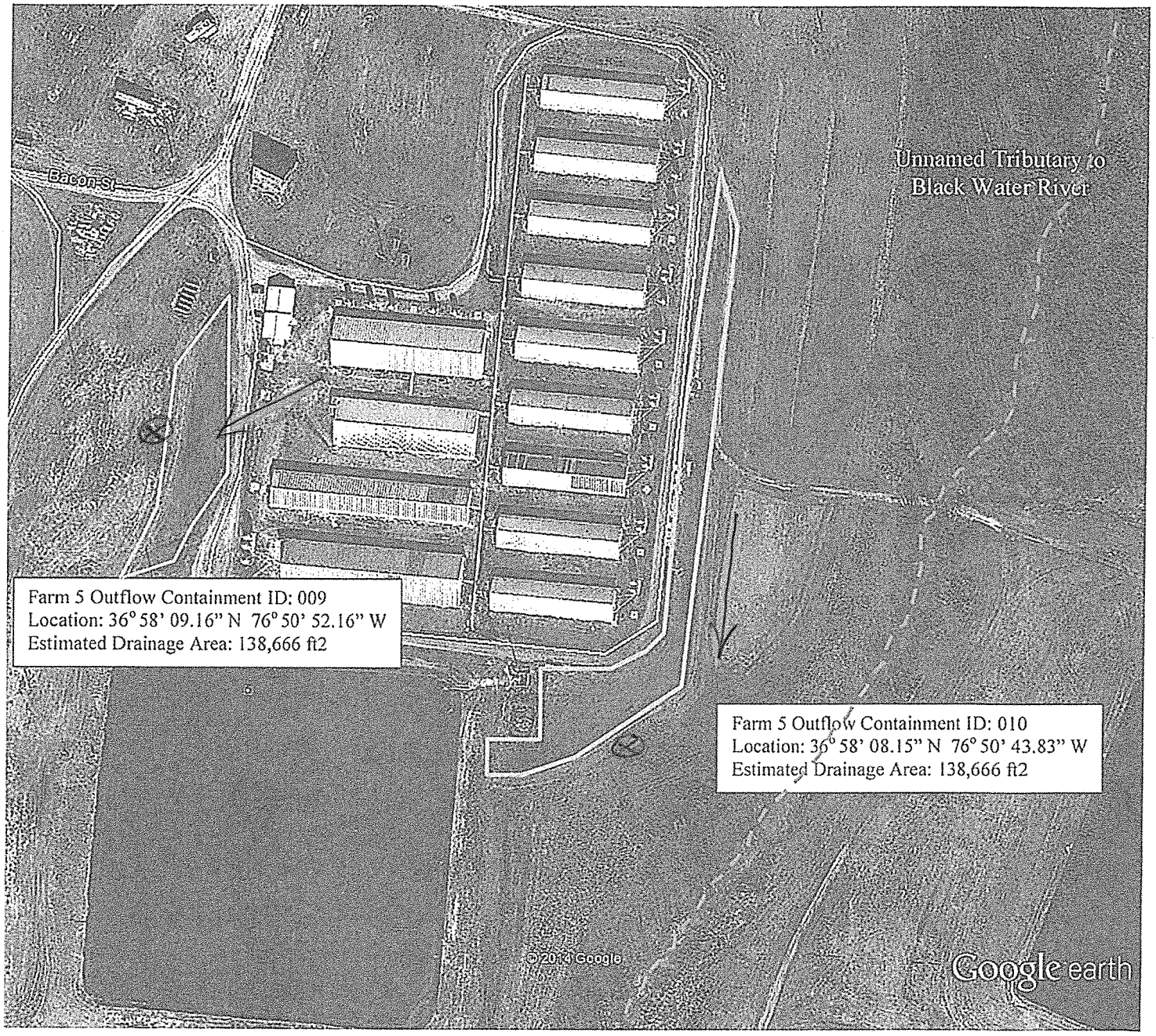
Secondary Containment Location

Intermittent Stream

Containment Valve

Inlet & Direction of Surface Water Flow

Murphy-Brown LLC
Farm 5 – Proctors Bridge
Secondary Containment Diagram



Key

Secondary Containment Location

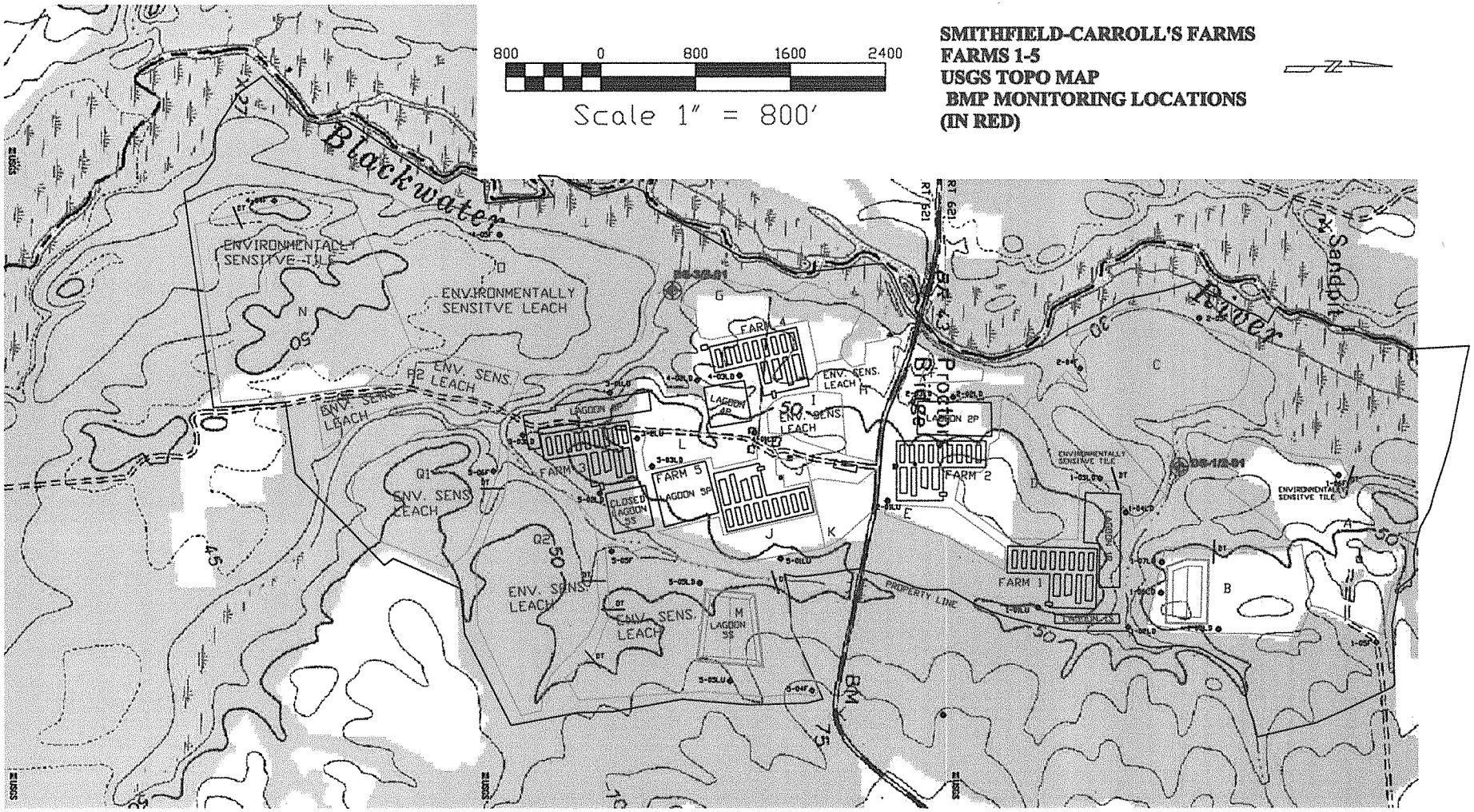
Intermittent Stream

Containment Valve

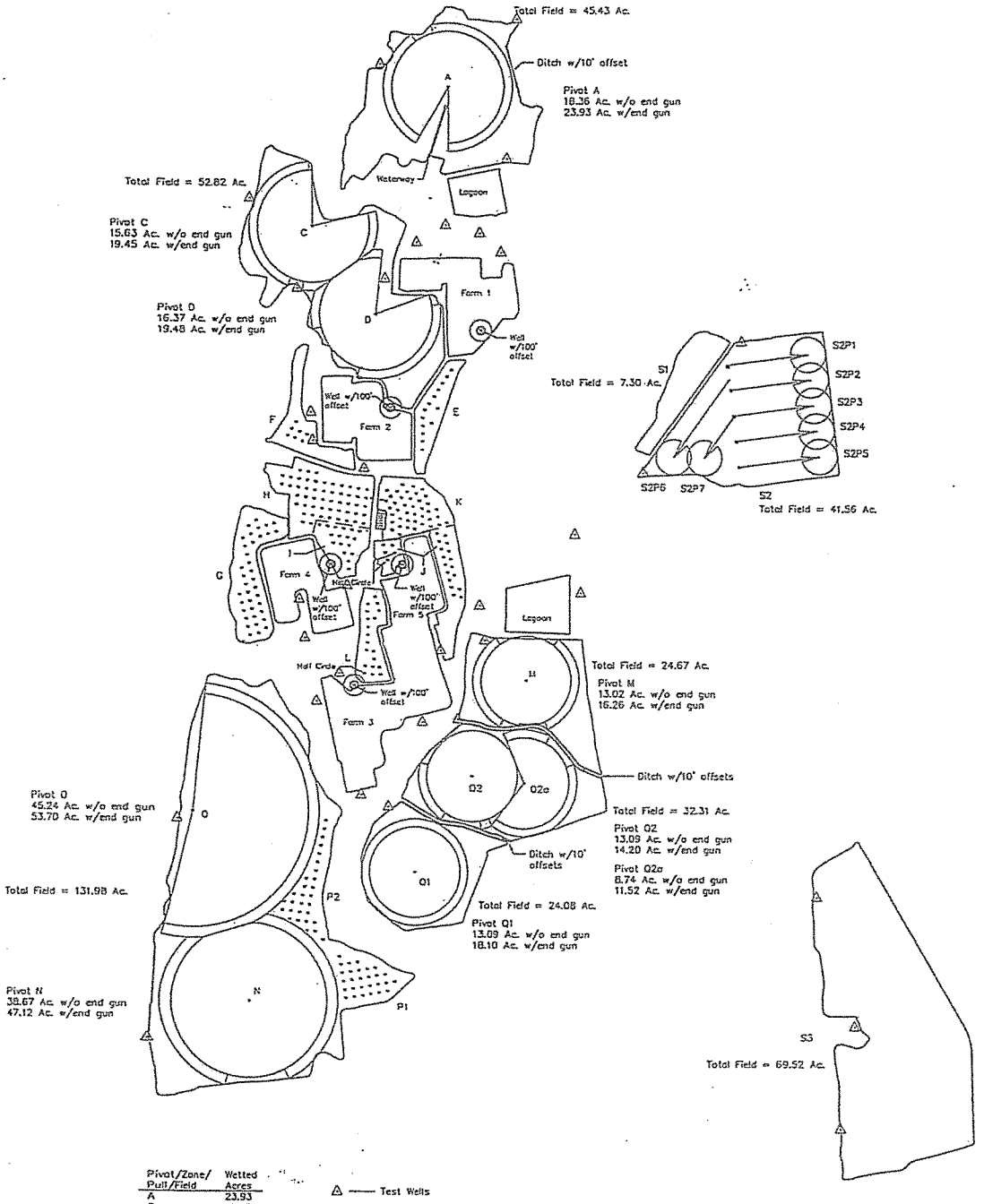
Inlet & Direction of Surface Water Flow

ATTACHMENT 3

SCHEMATIC/PLANS & SPECS/SITE MAP/ WATER BALANCE


800 0 800 1600 2400
Scale 1" = 800'
SMITHFIELD-CARROLL'S FARMS
FARMS 1-5
USGS TOPO MAP
BMP MONITORING LOCATIONS
(IN RED)
Blackwater
Sandpit River
Proctor Bridge
ENVIRONMENTALLY SENSITVE TILE
ENVIRONMENTALLY SENSITVE LEACH
ENV. SENS. LEACH
FARM 1
FARM 2
FARM 3
FARM 4
FARM 5
LAGOON 1P
LAGOON 2P
LAGOON 3P
LAGOON 4P
LAGOON 5P
CLOSED LAGOON 5S
LAGOON 5S
PROPERTY LINE
RT 621
RT 643

VA Farms 1-5
Scale: 1"=1000'



Pivot/Zone/ Pull/Field	Wetted Acres
A	23.93
C	19.45
D	19.48
E	2.63
F	1.26
G	6.41
H	8.52
I	2.69
J	3.74
K	6.72
L	3.27
M	16.26
N	47.12
O	53.70
P1	4.67
P2	4.83
Q1	18.10
Q2	14.20
Q2a	11.52
S2P1	5.85
S2P2	4.99
S2P3	4.99
S2P4	4.99
S2P5	6.59
S2P6	6.79
S2P7	3.99
Total	305.89

△ —— Test Wells

V. DISCHARGE POINT AND BEST MANAGEMENT PRACTICES (BMPs) RELATED TO A DISCHARGE POINT

For each discharge point, provide the following information in the table below:

a) a descriptive name of the discharge point;
b) the latitude and longitude of its location;
c) the name of the nearest potential receiving water;
d) all areas contributing manure, litter, process wastewater, or storm water from the facility; and
e) the treatment received or BMPs utilized, installed or constructed prior to the discharge point.

For DEQ Use: I.D. Number	Discharge Point	Latitude	Longitude	Name of Nearest Potential Receiving Water	Area Contributing Flow	Treatment or BMPs
	1	36°58'37.18" N	76°58'37.18" N	Unnamed tributary to Blackwater River	Production Facility – Farm 1	Secondary Containment
	2	36°58'40.13" N	76°50'35.69" W	Unnamed tributary to Blackwater River	Production Facility – Farm 1	Secondary Containment
	3	36°58'23.94" N	76°50'58.20' W	Unnamed tributary to Blackwater River	Production Facility – Farm 2	Secondary Containment
	4	36°58'31.11" N	76°50'54.49" W	Unnamed tributary to Blackwater River	Production Facility – Farm 2	Secondary Containment
	5	36°58'53.18" N	76°50'52.17" W	Unnamed tributary to Blackwater River	Production Facility – Farm 2	Secondary Containment
	6	36°57'53.18" N	76°50'52.17" W	Unnamed tributary to Blackwater River	Production Facility – Farm 3	Secondary Containment
	7	36°57'55.99" N	76°50'52.17" W	Unnamed tributary to Blackwater River	Production Facility – Farm 3	Secondary Containment

	8	36°58'16.10" N	76°51'2.20" W	Unnamed tributary to Blackwater River	Production Facility – Farm 4	Secondary Containment
	9	36°58'16.10" N	76°50'52.08" W	Unnamed tributary to Blackwater River	Production Facility – Farm 5	Secondary Containment
	10	36°58'7.87" N	76°50'44.25" W	Unnamed tributary to Blackwater River	Production Facility – Farm 5	Secondary Containment

VI. BEST MANAGEMENT PRACTICES (BMPs)

A. BMPs are utilized, installed or constructed for each of the areas listed in Section V above. X Yes ☐ No

B. If no, please explain: _____

C. Attach to this Addendum, a description of the BMPs listed above in Section V or a copy of the Farm Operating Manual (if already developed). *The attached copy may be a hard copy or an electronic copy.*

VII. OTHER ATTACHMENTS (see instructions for requirements)

A. The completed and signed Local Government Ordinance Form (LGOF) is attached: ? Yes ? No X On file with DEQ

B. A copy of the Department of Conservation and Recreation (DCR) Nutrient Management Plan (NMP) approval letter is attached: X Yes ? No

VIII. CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: Kraig Westerbeek Official Title: *Assistant Vice President of Environment, Health, & Safety*

Signature: _____ Date: 5-29-13

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BMP Description – Secondary Containment

The BMP is a grass covered earthen containment structure that collects runoff from the production area. The structure has a manually operated value that is maintained as normally closed. The BMP is inspected daily by the farm production staff. Once water collects in the structure it is visually inspected to ensure it does not contain any contaminants and it released. The BMP has an emergency spillway for structural integrity during extreme rainfall events.

Murphy-Brown LLC *EMS Policies/Procedures*	**Secondary Containment**	Original Date: 5/1/04 Revision Date: 4/1/10	Doc.# MB 035 Page 1 of 2

1.0 PURPOSE AND SCOPE

Purpose: To provide guidelines for the management of secondary containment structures where present.

Scope: All Murphy-Brown Eastern Operations sites

2.0 REQUIREMENTS

The goal of secondary containment is to reduce risk. Farms may have two different types of secondary containment, one is for wastewater spills or leaks and the other is for fuel. Each is managed similarly.

Support Operations may also have secondary containment for fuel, liquid fat, or other liquid ingredients.

Principles for operating a secondary containment structure:

1. The knife gate, valve, or other point of outlet control mechanism must be closed when a spill occurs to be effective. Therefore at all possible times the **outlet must be kept closed**, except for when clean rainwater is actively being released from the containment structure, so that it will be empty for a future potential spill or rain event.

2. The secondary containment should be kept in a normally dry condition. If water is in the containment structure prior to a spill then there is 1) less volume available to store the spill, and 2) more contaminated fluid to remove and dispose of properly. Additionally, a containment structure with a dry bottom allows for much easier observation and earlier detection of potential spills. A dry / empty secondary containment is designed to hold the contents of the largest tank within it, or a minimum of 12 hours of operation by the recycle pump.

Operation:

1. **The farm staff or support operation staff is responsible for checking the containment structure each day.** This check should be completed as early as the containment can be observed effectively and safely. In all cases a secondary containment should be checked before noon each day.

2. If any water is found to be in the structure, a careful inspection of the contents within the containment structure shall be performed to ensure that no wastewater or contaminants are present. If there is no evidence of wastewater or contaminants, the valve/gate should be opened to allow the rainwater to drain out. While working the valve, personnel should observe the water outlet to be sure that erosion is not occurring to the dike at the pipe outlet. Upon emptying the valve/gate should be returned to the closed position.

3. The farm manager or designee shall ensure that the gate is closed when the last employee leaves the facility regardless of if the containment pond is dry or partially full of water. **[Note: Valves may not seal if debris, dirt, or trash prevents proper and complete closure of the valve, in which case the secondary containment will not be effective as desired.]**

4. On farms, LNM personnel will inspect the secondary containment specific to structural integrity, accessibility, and general operating condition. This inspection will be documented as a part of their weekly inspection.

5. If wastewater, fuel, fat or other contaminates are found in the containment, make the appropriate contacts as indicated on the Environmental Emergency Contact Plan, ensure that the source has been stopped, and then begin the recovery process.

3.0 REFERENCES

None

4.0 FORMS

EMS Internal Audits
EMS Farm Manager Checklist
Weekly LNM Inspection
Storm Water Qualitative Monitoring Checklist (for mills only)
Supporting Ops Monthly Checklists

5.0 DEFINITIONS

Secondary containment – Secondary containment is designed to capture any liquid that might spill or leak from its intended location. The outlets of these structures will generally be operated in a normally closed position.

6.0 REVISION HISTORY

Revision #1 Dated 9/18/06	Assigned responsibilities and "how to" of valve management for secondary containment.
Revision #2 Dated 5/1/07	Included all types of containment structures.
Revision #3 Dated 3/27/09	Removed references to slam gates; added LNM oversight during weekly inspection.
Revision #4 Dated 4/1/10	Added operational requirements for checking the containment

2013

Calendar Year Pumping Data
&
Crop Yield Information

Farm 1-5

Best Management Practices (BMP) Monitoring – See attached report

If the average (for fecal coli form, geometric mean) data collected for a site exceeds the established base line the possible causes will be evaluated and changes to the BMP Plan or BMP Monitoring Plan may be proposed. However, if average (for fecal coli form, geometric mean) data collected for a site decreases, then that average shall become the new baseline for that site.

Further evaluation of the BMP sites and the consistent problems of no flow have lead us to further evaluate our BMP Monitoring Plan. We are conducting a detailed review of all the BMP sites with the intent of proposing a revision to the BMP Monitoring Plan. We are currently working with DEQ on a new farm permit that will result in changes tot he BMP Monitoring Program.

B. Yearly Wastewater Balance

A table is attached which details the inputs and drawdowns to the storage structure. Both the input and drawdown data are limited. Total rainfall is recorded at each facility. Fresh water inputs are measured by a meter located between the well house and the farm. Freshwater input includes water used for both washing and animal consumption. The wash water will ultimately accumulate in the lagoon. The water consumed by the animals takes the form of manure, a portion is retained by the animal, and a portion is lost to respiration by the animal. Although these latter factors are not measured, the freshwater input is roughly equal to the manure output in volume. Also included are water volumes transferred to and from other farms for freeboard management.

Drawdown is the total of the gallons pumped from the lagoon, plus that which evaporates. The gallons pumped are accurate, as equipment calibration allows measurement of the total flow when pumping. Evaporation is computed here using the average lake evaporation in the subject county, multiplied by the surface area of the lagoon. The total is reduced by 10% to account for differences between evaporation of fresh water versus lagoon water (VA DCR Nutrient Management Handbook Table 6-8, July 1993). Actual evaporation will be affected by 1) fluctuating lagoon levels which vary the surface area, and 2) weather extremes.

A difference of approximately 15318362 gallons greater inputs than drawdown is computed with the methodology described above. It should be noted that, this method does not include starting and ending freeboard levels.

C. Annual Nutrient Loading

The 2013 Calendar Year Irrigation Summary is attached which details the plant available nitrogen (PAN) and/or the plant available phosphorus (PAP) applied to each crop field.

Fields with greater than 100% PAN applied: None

D. Summary of Agronomic Practices

2013 Pumping Data & Crop Yield Information

Facility	Field	Crop	Farm : Field - Crop	Acres	Starting PAN	PAN Applied	PAN Remaining	% PAN Applied	Starting PAP	PAP Applied	PAP Remaining	% PAP Applied	K Applied	2013 Actual Yield (ton./ac.) (bu./ac.)	NUP Projected Yield/ac. (ton./ac.) (bu./ac.)	% of Projected Yield
8501-8505	A	Small Grain	8501-8505 : A - Small Grain Total	23.93	70.00	7.77	62.23	11.10%		2.59	0.00	0.00%	34.18	1.400	2	70.0%
8501-8505	A	Bermuda	8501-8505 : A - Bermuda Total	23.93	270.00	58.94	211.06	21.83%		34.24	0.00	0.00%	414.90	2.048	5	41.0%
8501-8505	A	Small Grain	8501-8505 : A - Small Grain Total	23.93	70.00	25.82	44.18	36.88%		24.35	0.00	0.00%	204.81	N/A		
8501-8505	D	Corn	8501-8505 : D - Corn Total	19.48	140.00	34.26	105.74	24.47%		15.79	0.00	0.00%	198.20	58.008	138	42.0%
8501-8505	D	Wheat	8501-8505 : D - Wheat Total	19.48	100.00	18.89	81.11	18.89%		20.14	0.00	0.00%	173.50	#N/A		
8501-8505	E	Corn	8501-8505 : E - Corn Total	2.63	80.00	17.86	62.14	22.32%		8.38	0.00	0.00%	104.95	58.175	80	72.7%
8501-8505	F	Corn	8501-8505 : F - Corn Total	1.26	150.00	31.11	118.89	20.74%		12.04	0.00	0.00%	155.06	26.984	150	18.0%
8501-8505	G	Bermuda	8501-8505 : G - Bermuda Total	6.41										1.014	1	101.4%
8501-8505	G	Small Grain	8501-8505 : G - Small Grain Total	6.41										1.014	2	50.7%
8501-8505	G	Sorghum	8501-8505 : G - Sorghum Total	6.41	100.00	25.55	74.45	25.55%		15.27	0.00	0.00%	164.64	24.961	100	25.0%
8501-8505	H	Bermuda	8501-8505 : H - Bermuda Total	8.52										1.174	1	117.4%
8501-8505	H	Small Grain	8501-8505 : H - Small Grain Total	8.52	70.00	16.99	53.01	24.27%		5.66	0.00	0.00%	74.76	1.174	2	58.7%
8501-8505	H	Sorghum	8501-8505 : H - Sorghum Total	8.52	110.00	57.60	52.40	52.36%		33.56	0.00	0.00%	405.59	25.000	114	21.9%
8501-8505	I	Bermuda	8501-8505 : I - Bermuda Total	2.89										1.557	1	155.7%
8501-8505	I	Small Grain	8501-8505 : I - Small Grain Total	2.89										1.557	2	77.9%
8501-8505	I	Sorghum	8501-8505 : I - Sorghum Total	2.89	110.00	88.33	21.67	80.30%		45.46	0.00	0.00%	562.61	25.260	107	23.6%
8501-8505	J	Small Grain	8501-8505 : J - Small Grain Total	3.74	70.00	5.17	64.83	7.39%		1.72	0.00	0.00%	22.76	0.936	2	46.8%
8501-8505	J	Bermuda	8501-8505 : J - Bermuda Total	3.74	270.00	63.52	206.48	23.52%		33.78	0.00	0.00%	398.26	4.144	5	82.9%
8501-8505	K	Small Grain	8501-8505 : K - Small Grain Total	6.72	70.00	31.27	38.73	44.67%		10.42	0.00	0.00%	137.60	1.116	2	55.8%
8501-8505	K	Bermuda	8501-8505 : K - Bermuda Total	6.72	270.00	136.41	133.59	50.52%		68.33	0.00	0.00%	831.66	5.060	5	101.2%
8501-8505	L	Small Grain	8501-8505 : L - Small Grain Total	3.27										1.682	2	84.1%
8501-8505	L	Bermuda	8501-8505 : L - Bermuda Total	3.27	270.00	61.43	208.57	22.75%		35.97	0.00	0.00%	431.27	2.599	5	52.0%
8501-8505	M	Corn	8501-8505 : M - Corn Total	16.26										45.018	170	26.5%
8501-8505	N	Small Grain	8501-8505 : N - Small Grain Total	47.12	70.00	41.20	28.80	58.85%		11.68	0.00	0.00%	139.13	3.247	2	162.4%
8501-8505	N	Bermuda	8501-8505 : N - Bermuda Total	47.12	235.00	85.67	149.33	36.45%		39.41	0.00	0.00%	388.86	6.507	2.8	232.4%
8501-8505	N	Small Grain	8501-8505 : N - Small Grain Total	47.12	70.00	34.28	35.72	48.97%		30.63	0.00	0.00%	173.81	N/A		
8501-8505	O	Small Grain	8501-8505 : O - Small Grain Total	53.70										1.136	1.8	63.1%
8501-8505	O	Bermuda	8501-8505 : O - Bermuda Total	53.70	235.00	105.08	129.92	44.71%		48.04	0.00	0.00%	520.79	2.309	3.3	70.0%
8501-8505	P1	Small Grain	8501-8505 : P1 - Small Grain Total	4.67	70.00	27.82	42.18	39.74%		9.48	0.00	0.00%	117.80	2.570	1	257.0%
8501-8505	P1	Bermuda	8501-8505 : P1 - Bermuda Total	4.67	235.00	112.49	122.51	47.87%		54.24	0.00	0.00%	523.72	4.946	3	164.9%
8501-8505	P2	Small Grain	8501-8505 : P2 - Small Grain Total	4.83	70.00	28.72	41.28	41.03%		9.78	0.00	0.00%	121.62	1.346	1.8	74.8%
8501-8505	P2	Bermuda	8501-8505 : P2 - Bermuda Total	4.83	235.00	139.58	95.42	59.39%		66.66	0.00	0.00%	646.47	1.967	3.5	56.2%
8501-8505	Q1	Small Grain	8501-8505 : Q1 - Small Grain Total	18.10	70.00	36.55	33.45	52.21%		9.90	0.00	0.00%	113.97	3.273	1.8	181.9%
8501-8505	Q1	Bermuda	8501-8505 : Q1 - Bermuda Total	18.10	235.00	85.20	149.80	36.26%		39.24	0.00	0.00%	386.99	6.961	3.5	198.9%
8501-8505	Q1	Small Grain	8501-8505 : Q1 - Small Grain Total	18.10	70.00	36.06	33.95	51.51%		32.93	0.00	0.00%	182.96	N/A		
8501-8505	S2P1	Corn	8501-8505 : S2P1 - Corn Total	5.85	150.00	72.73	77.27	48.49%		22.29	0.00	0.00%	224.25	135.043	150	90.0%
8501-8505	S2P2	Corn	8501-8505 : S2P2 - Corn Total	4.99	150.00	83.22	66.78	55.48%		35.35	0.00	0.00%	362.34	135.070	150	90.0%
8501-8505	S2P2	Wheat	8501-8505 : S2P2 - Wheat Total	4.99	100.00	23.78	76.22	23.78%		23.36	0.00	0.00%	120.99	#N/A		
8501-8505	S2P3	Corn	8501-8505 : S2P3 - Corn Total	4.99	140.00	79.48	60.52	56.77%		18.64	0.00	0.00%	208.56	135.070	140	96.5%
8501-8505	S2P3	Wheat	8501-8505 : S2P3 - Wheat Total	4.99	100.00	23.78	76.22	23.78%		23.36	0.00	0.00%	120.99	#N/A		
8501-8505	S2P4	Corn	8501-8505 : S2P4 - Corn Total	4.99	140.00	104.73	35.27	74.81%		35.33	0.00	0.00%	352.53	135.070	150	90.0%
8501-8505	S2P5	Corn	8501-8505 : S2P5 - Corn Total	6.59	140.00	60.40	79.60	43.14%		30.71	0.00	0.00%	289.53	135.053	150	90.0%
8501-8505	S2P5	Wheat	8501-8505 : S2P5 - Wheat Total	6.59	100.00	18.00	82.00	18.00%		17.69	0.00	0.00%	91.62	#N/A		
8501-8505	S2P6	Corn	8501-8505 : S2P6 - Corn Total	6.79	150.00	88.42	61.58	58.95%		29.98	0.00	0.00%	302.52	135.052	150	90.0%
8501-8505	S2P6	Wheat	8501-8505 : S2P6 - Wheat Total	6.79	100.00	17.47	82.53	17.47%		17.16	0.00	0.00%	88.92	#N/A		
8501-8505	S2P7	Corn	8501-8505 : S2P7 - Corn Total	3.99	150.00	17.34	132.66	11.56%		9.50	0.00	0.00%	86.71	135.088	150	90.1%
					5235.00	**2002.91**	**3232.09**	**38.26%**	**0.00**	**15.27**	**0.00**	**#DIV/0!**	**9879.83**			**90.1%**

Note: No value in the Starting PAP column indicates that application on that field is N based.
CF in the 2013 Actual Yield column indacates a crop faliure. There were some crops lost to excessive rainfall in 2013.
A value in the Starting PAP column indicates that application on that field is P based.
N/A in the 2013 Actual Yield column indicates the crop is actively growing in the field and not yet harvested.

ATTACHMENT 4

DISCHARGE/OUTFALL DESCRIPTION

ATTACHMENT 4
Discharge Location Descriptions

OUTFALL NUMBER	Est. FLOW	DISCHARGE SOURCE	TREATMENT*	ADDITIONAL BEST MANAGEMENT PRACTICES
001	.006	Production Facility – Farm 1	Secondary Containment	Nutrient Management Plan, Buffers, Setbacks and Conservation Tillage,
002		Production Facility – Farm 1	Secondary Containment	
003	.004	Production Facility – Farm 2	Secondary Containment	
004		Production Facility – Farm 2	Secondary Containment	
005		Production Facility – Farm 2	Secondary Containment	
006	.006	Production Facility – Farm 3	Secondary Containment	
007		Production Facility – Farm 3	Secondary Containment	
008	.011	Production Facility – Farm 4	Secondary Containment	
009	.005	Production Facility – Farm 5	Secondary Containment	
010		Production Facility – Farm 5	Secondary Containment	

.032 MGD estimated total flow from outfalls 001 – 010 -(see calculations next page)

*BMP Description-Secondary Containment: Consists of a grass covered earthen containment structure that collects runoff from the production area. The structure has a manually operated valve that is maintained as normally closed. The BMP is inspected daily by the farm production staff. Once water collects in the structure, it is visually inspected to ensure it does not contain any contaminants and then released.

Sanitary wastes from the employees are directed to a separate drain field.

Murphy Brown Proctors Bridge Farm Stormwater Outfall
Flow Calculations

Annual average rainfall (46.62") for the Raynor, Va area is an average of 0.128 inches per day....Converted to feet is **0.0107 feet of rainfall**

Runoff Coefficients of **0.5 for pervious surfaces** and 0.9 for impervious surfaces were obtained from "Design and Construction of Sanitary and Storm Sewers"

Coefficient to convert cu. ft. to MGD is 7.48e-6

Outfalls **001 & 002** est. 162,912 sq ft pervious surface x 0.5 = 81,456 sq. ft.
No impervious service Total Area = 81,456 sq. ft.
Total Runoff Volume 0.0107 ft rain X 81,456 = 871.6 cu ft. x 7.48e-6 = **0.0064 MGD**

Outfalls **003, 004 & 005** est. 93,563 sq ft pervious surface x 0.5 = 46,781 sq. ft.
No impervious service Total Area = 46,781 sq. ft.
Total Runoff Volume 0.0107 ft rain X 46,781 = 500.56 cu ft. x 7.48e-6 = **0.0037 MGD**

Outfalls **006 & 007** est. 157,630 sq ft pervious surface x 0.5 = 78,815 sq. ft.
No impervious service Total Area = 78,815 sq. ft.
Total Runoff Volume 0.0107 ft rain X 78,815 = 843.32 cu ft. x 7.48e-6 = **0.0062 MGD**

Outfall **008** est. 285,776 sq ft pervious surface x 0.5 = 142,888 sq. ft.
No impervious service Total Area = 142,888 sq. ft.
Total Runoff Volume 0.0107 ft rain X 142,888 = 1,529 cu ft. x 7.48e-6 = **0.011 MGD**

Outfalls **009 & 010** est. 138,666 sq ft pervious surface x 0.5 = 69,333 sq. ft.
No impervious service Total Area = 69,333 sq. ft.
Total Runoff Volume 0.0107 ft rain X 69,333 = 741.86 cu ft. x 7.48e-6 = **0.005 MGD**

Estimated Total Storm water flow from <u>all Proctors Bridge Farm outfalls</u> <u>is 0.032 MGD</u>

ATTACHMENT 5

TABLE II - EFFLUENT MONITORING/LIMITATIONS

TABLE II - INDUSTRIAL (CAFO) WASTE LIMITATIONS/MONITORING

Outfall Description: Farms 1-5 Production Facilities
SIC CODE: 0213

(X) Final Limits ( ) Interim Limits Effective Dates - From: Issuance To: Expiration

WASTE MONITORING [a]

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			Frequency	Sample Type
Total Kjeldahl Nitrogen	NL	*	2/year	Composite
Ammonia Nitrogen	NL	*	2/year	Composite
Total Phosphorus	NL	*	2/year	Composite
Total Potassium	NL	*	2/year	Composite
Calcium	NL	*	2/year	Composite
Magnesium	NL	*	2/year	Composite
Moisture Content	NL	%	2/year	Composite

Notes: NL = No limit, this is a monitoring requirement only.
* Parameters for waste may be reported as a percent, as lbs/ton or lbs/1000 gallons, or as ppm where appropriate.

2/Year = Between January 1 - June 30 and between July 1-December 31.

[a] Analysis of waste shall be according to methods specified in the facility's approved Nutrient Management Plan or alternative procedures outlined in the Farm Operating Manual.

ATTACHMENT
DEPARTMENT OF ENVIRONMENTAL QUALITY
VPDES Monitoring Report

Facility Name: Murphy Brown LLC Farms 1-5
Address: 1240 Bacon Street
Ivor, VA 23890

VPDES Permit No.: VA0C50001

Report Period: From ___/___/___ To ___/___/___

Monitoring Station: **Industrial CAFO Waste Monitoring**

Parameters	Units		Monitoring Results		Analysis Frequency	Sample Type
			Average	Maximum		
TKN	*	Reported				
		Required	NL	NL	2/Year	Composite
Ammonia-Nitrogen	*	Reported				
		Required	NL	NL	2/Year	Composite
Total Phosphorus	*	Reported				
		Required	NL	NL	2/Year	Composite
Total Potassium	*	Reported				
		Required	NL	NL	2/Year	Composite
Calcium	*	Reported				
		Required	NL	NL	2/Year	Composite
Magnesium	*	Reported				
		Required	NL	NL	2/Year	Composite
Moisture Content	%	Reported				
		Required	NL	NL	2/Year	Composite

_____
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. □1001 and 33 U.S.C. □1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

_____
Signature of Principal Officer or Authorized Agent / Date

TABLE II - INDUSTRIAL (CAFO) LIMITATIONS/MONITORING

Outfall Description: Farms 1-5 Application Sites
SIC CODE: 0213

(X) Final Limits ( ) Interim Limits Effective Dates - From: Issuance To: Expiration

SOILS MONITORING

PARAMETER	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			Frequency**	Sample Type
pH	NL	SU	1/3 years	Composite *
Phosphorus	NL	ppm or lbs/ac	1/3 years	Composite *
Potassium	NL	ppm or lbs/ac	1/3 years	Composite *
Calcium	NL	ppm or lbs/ac	1/3 years	Composite *
Magnesium	NL	ppm or lbs/ac	1/3 years	Composite *

Notes: NL = No limit, this is a monitoring requirement only.
SU = Standard Units
* Specific sampling requirements are found in the facility's approved Nutrient Management Plan.

1/3Years = Between January 1 and December 31.

[a] Soil monitoring shall be conducted at a depth of between 0-6 inches, unless otherwise specified in the facility's approved Nutrient Management Plan.

[b] Analysis of soil shall be according to methods specified in the facility's approved Nutrient Management Plan.

ATTACHMENT
DEPARTMENT OF ENVIRONMENTAL QUALITY
VPDES Monitoring Report

Facility Name: Murphy Brown LLC Farms 1-5
Address: 1240 Bacon Street
Ivor, VA 23890

VPA Permit No.: VA0C50001

Report Period: From __/__/__ To __/__/__

Monitoring Station: **Soils Monitoring -Land Application Site**

Parameters	Units		Monitoring Results		Frequency of Analysis	Sample Type
			Average	Maximum		
Soil pH	SU	Reported				
		Required	NL(min)	NL	1/3 Years	Composite
Phosphorus	ppm or lbs/ac	Reported				
		Required	*****	NL	1/3 Years	Composite
Potassium	ppm or lbs/ac	Reported				
		Required	*****	NL	1/3 Years	Composite
Calcium	ppm or lbs/ac	Reported				
		Required	*****	NL	1/3 Years	Composite
Magnesium	ppm or lbs/ac	Reported				
		Required	*****	NL	1/3 Years	Composite

_____

Name of Principal Exec. Officer or Authorized Agent / Title

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_____

Signature of Principal Officer or Authorized Agent / Date

TABLE II - INDUSTRIAL (CAFO) LIMITATIONS/MONITORING

GW Well #:
SIC CODE: 0213
(X) Final Limits ( ) Interim Limits Effective Dates - From: Issuance To: Expiration

GROUNDWATER MONITORING

PARAMETER	LIMITATIONS	UNITS	MONITORING REQUIREMENTS[c]	
			Frequency[a]	Sample Type
Static Water Level	NL	.01 ft	2/year *	Measured
Temperature	NL	°C/°F	2/year *	Grab[b]
Turbidity	NL	NTU	2/year *	Grab
Ammonia Nitrogen	NL	mg/l	2/year *	Grab
Nitrate Nitrogen	NL	mg/L	2/year *	Grab
pH	NL	SU	2/year *	Grab
Conductivity	NL	umhos/cm	2/year *	Grab

Note: NL = No limit, this is a monitoring requirement only.
* see Part I.B.4.b.(4) above for new well monitoring frequency

2/Year = Between January 1 - June 30 and between July 1-December 31

[a] See Part I.B.4.b.(4) for additional instructions regarding ground water monitoring frequencies.
[b] Grab samples - An individual sample should be taken after three (3) well volumes of groundwater are removed (allowing the well to recharge between each well volume removed) or until well purging parameters (i.e. pH, temperature, and specific conductance) stabilize to ± 10%. The bailer or hose used should not contaminate samples.
[c] See Part I.B.4.b.(5) where data shall be analyzed and used to compare to an action level identified in the Groundwater Monitoring Plan which will trigger an established response from the Permittee to begin remedial action. Remedial action shall include, but not be limited to, 1) locating the source of the contamination; 2) eliminating the source or restricting the extent of the source; and 3) devising a sampling program to document the effectiveness of the remedial action to include repeating source discrimination geochemistry on the affected monitoring well(s). The remedial action shall be initiated within the next calendar quarter after data analysis has identified the need for remedial action

ATTACHMENT
DEPARTMENT OF ENVIRONMENTAL QUALITY
VPDES Monitoring Report

Facility Name: Murphy Brown LLC Farms 1-5
Address: 1240 Bacon Street
Ivor, VA 23890
VPA Permit No.: VA0C50001

Report Period: From ___/___/___ To ___/___/

Monitoring Station: **Ground Water Monitoring - Well No. _____**

Parameters	Units		Monitoring Results		Frequency of Analysis	Sample Type
			Average	Maximum		
Static Water Level	0.01 ft	Reported				
		Required	*****	NL	2/year	Measured
Temperature	°C/°F	Reported				
		Required	*****	NL	2/year	Grab
Turbidity	NTU	Reported				
		Required	*****	NL	2/year	Grab
Ammonia-Nitrogen	mg/l	Reported				
		Required	*****	NL	2/year	Grab
Nitrate-Nitrogen	mg/l	Reported				
		Required	*****	NL	2/year	Grab
pH	Std units	Reported				
		Required	*****	NL	2/year	Grab
Conductivity	umhos/cm	Reported				
		Required	*****	NL	2/year	Grab

_____
Name of Principal Exec. Officer or Authorized Agent / Title

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_____
Signature of Principal Officer or Authorized Agent / Date

TABLE II - STORM WATER EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 001-010
Outfall Description: see below
SIC CODE: 0213

NOTE: These outfalls represent storm event monitoring for non-process outfalls.

STORM WATER DISCHARGE MONITORING

FEATURES TO BE MONITORED IN THE PRODUCTION AREA					MONITORING REQUIREMENTS	
					Frequency *	Sample Type
Discharge points:						
001	36°58'37.87" N	76°50'48.91"W	UT to Blackwater River	Farm 1 Production Fac	Quarterly [a]	Grab
002	36°58'40.66" N	76°50'.35.85"W	UT to Blackwater River	Farm 1 Production Fac		
003	36°58'21.66" N	76°50'.46.51"W	UT to Blackwater River	Farm 2 Production Fac		
004	36°58'31.07" N	76°50'54.58"W	UT to Blackwater River	Farm 2 Production Fac		
005	36°58'24.06" N	76°50'58.56"W	UT to Blackwater River	Farm 2 Production Fac		
006	36°57'53.18" N	76°50'51.84"W	UT to Blackwater River	Farm 3 Production Fac		
007	36°57'56.08" N	76°50'49.92"W	UT to Blackwater River	Farm 3 Production Fac		
008	36°58'15.89" N	76°51'02.53"W	UT to Blackwater River	Farm 4 Production Fac		
009	36°58'09.16" N	76°50'52.16"W	UT to Blackwater River	Farm 5 Production Fac		
010	36°58'08.15" N	76°50'43.83"W	UT to Blackwater River	Farm 5 Production Fac		

Notes: * The visual inspection shall be made during normal working hours.
** No analytical tests are required to be performed on the samples.
*** Surface waters as defined in Attachment 12-Definition of Terms.

[a]Quarterly = In accordance with the following schedule: 1st quarter (January 1 - March 31); 2nd quarter (April 1 - June 30); 3rd quarter (July 1 - September 30); 4th quarter (October 1 - December 31).

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Murphy Brown Farm - 1 thru 5 - Proctors Bridge
ADDRESS PO Box 1240
Waverly VA 23890
FACILITY LOCATION 12520 Bacon St, Ivor, VA 23866

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

VA0C50001	001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

Industrial Minor 05/19/2014

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.**

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD	*********			*********	*********	*********				
	REQRMNT	*********	NL	MG	*********	*********	*********			4/YR	EST
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
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	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Visual Observations on Grab:

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Murphy Brown Farm - 1 thru 5 - Proctors Bridge
ADDRESS PO Box 1240
Waverly VA 23890
FACILITY LOCATION 12520 Bacon St, Ivor, VA 23866

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

VA0C50001	002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

Industrial Minor 05/19/2014

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

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PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD	*********			*********	*********	*********				
	REQRMNT	*********	NL	MG	*********	*********	*********			4/YR	EST
	REPORTD										
	REQRMNT									*******	
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	REQRMNT									*******	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Visual Observations on Grab:

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

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OPERATOR IN RESPONSIBLE CHARGE			DATE		
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PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Murphy Brown Farm - 1 thru 5 - Proctors Bridge
ADDRESS PO Box 1240
Waverly VA 23890
FACILITY LOCATION 12520 Bacon St, Ivor, VA 23866

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Minor 05/19/2014

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.**

VA0C50001	003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD	*********			*********	*********	*********				
	REQRMNT	*********	NL	MG	*********	*********	*********			4/YR	EST
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
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ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Visual Observations on Grab:

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

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OPERATOR IN RESPONSIBLE CHARGE			DATE		
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PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Murphy Brown Farm - 1 thru 5 - Proctors Bridge
ADDRESS PO Box 1240
Waverly VA 23890
FACILITY LOCATION 12520 Bacon St, Ivor, VA 23866

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

VA0C50001	004
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

Industrial Minor 05/19/2014

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD	*********			*********	*********	*********				
	REQRMNT	*********	NL	MG	*********	*********	*********			4/YR	EST
	REPORTD										
	REQRMNT									*******	
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	REQRMNT									*******	
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	REQRMNT									*******	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Visual Observations on Grab:

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

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OPERATOR IN RESPONSIBLE CHARGE			DATE		
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PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Minor 05/19/2014

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Murphy Brown Farm - 1 thru 5 - Proctors Bridge
ADDRESS PO Box 1240
Waverly VA 23890
FACILITY LOCATION 12520 Bacon St, Ivor, VA 23866

VA0C50001	005
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Tidewater Regional Office
5636 Southern Boulevard

Virginia Beach VA 23462

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.**

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD	*********			*********	*********	*********				
	REQRMNT	*********	NL	MG	*********	*********	*********			4/YR	EST
	REPORTD										
	REQRMNT									*******	
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ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Visual Observations on Grab:

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

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OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Minor 05/19/2014

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Murphy Brown Farm - 1 thru 5 - Proctors Bridge
ADDRESS PO Box 1240
Waverly VA 23890
FACILITY LOCATION 12520 Bacon St, Ivor, VA 23866

VA0C50001	006
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.**

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD	*********			*********	*********	*********				
	REQRMNT	*********	NL	MG	*********	*********	*********			4/YR	EST
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ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Visual Observations on Grab:

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OPERATOR IN RESPONSIBLE CHARGE			DATE		
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PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Murphy Brown Farm - 1 thru 5 - Proctors Bridge
ADDRESS PO Box 1240
Waverly VA 23890
FACILITY LOCATION 12520 Bacon St, Ivor, VA 23866

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

VA0C50001	007
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

Industrial Minor 05/19/2014

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001 FLOW	REPORTD	*********			*********	*********	*********				
	REQRMNT	*********	NL	MG	*********	*********	*********			4/YR	EST
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	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	

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DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

VA0C50001	008
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
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Industrial Minor 05/19/2014

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001 FLOW	REPORTD	*********			*********	*********	*********				
	REQRMNT	*********	NL	MG	*********	*********	*********			4/YR	EST
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BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

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TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

62

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

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ADDRESS PO Box 1240
Waverly VA 23890
FACILITY LOCATION 12520 Bacon St, Ivor, VA 23866

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

VA0C50001	009
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

Industrial Minor 05/19/2014

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Visual Observations on Grab:

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

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69

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Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

NOTE: **READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.**

VA0C50001	010
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
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Visual Observations on Grab:

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PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

70

ATTACHMENT 6

SPECIAL CONDITIONS RATIONALE

VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE
ATTACHMENT 6

Special Conditions:

Waste Storage: The permittee is required to properly construct and operate the waste storage facilities.

Part II A	1	Design and Operation	Rationale: Required by § 62.1-44.17:1.E1 and 9VAC25-192-70
	2	New Storage	Rationale: Required by § 62.1-44.17:1.E6 and 9VAC25-192-70
	3	Earthen liquid waste storage	Rationale: Required by § 62.1-44.17:1.E5 and 9VAC25-192-70

Operation and Maintenance: The permittee is required to properly operate and maintain the facility.

Part II B	1	Production Area Operation	Rationale: Required by 9VAC25-31-200 E 1 c
	2	Chemical and other contaminant handling	Rationale: Required by 9VAC25-31-200 E 1 e
	3	Confined Animals	Rationale: Required by 9VAC25-31-200 E 1 d
	4	Liquid waste level	Rationale: Required by 9VAC25-192-70
	5	Freeboard	Rationale: Required by 9VAC25-192-70
	6	Depth marker	Rationale: Required by 9VAC25-31-30 (40CFR412 §412.47 (a) (2))
	7	Mortality disposal	Rationale: Required by 9VAC25-31-200 E 1 b and 40CFR412 (§412.47 (a) (4))

Special Conditions:

Part II C	1	Water Quality Standards Reopener	Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.
	2	Nutrient Enriched Waters Reopener	Rationale: The Policy for Nutrient Enriched Waters, 9 VAC 25-40 -10 allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy also anticipates that future total phosphorus and total nitrogen limits may be needed.
	3.	Total Maximum Daily Load (TMDL) Reopener	Rationale: For specified waters, Section 303(d) of the Clean Water Act requires the development of total maximum daily loads necessary to achieve the applicable water quality standards. The TMDL must take into account seasonal variations and a margin of safety. In addition, Section 62.1-44.19:7 of the State Water Control Law requires the development and implementation of plans to address impaired waters, including TMDLs. This condition allows for the permit to be either modified or, alternatively, revoked and reissued to incorporate the requirements of a TMDL once it is developed. In addition, the reopener recognizes that, in according to Section 402(o)(1) of the Clean

			Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under Section 303 of the Act.
	4	Farm Operating Manual	The permittee will develop and submit a farm operating manual. **Rationale: Required by** Code of Virginia § 62.1-44.16; VPDES Permit Regulation, 9VAC25-31-190 E, and 40 CFR 122.41(e). These require proper operation and maintenance of the permitted facility. Compliance with an approved O&M manual ensures this. **40CFR412 (§412.47)**
	5	Changes to the facility	**Rationale: Required by: 9VAC25-31-200 E**
	6	Notification Prior to Use	**Rationale: Required by: § 62.1-44.17:1 E 9 and 9VAC25-192-70**
	7	Materials Handling and Storage	**Rationale: Required by:**
	8	Storage Closure	**Rationale: Required by: 9VAC25-192-70**
	9	Training Requirement	**Rationale: Required by: § 62.1-44.17:1 E 10 and 9VAC25-192-70**

Nutrient Management Requirements: The permittee is required to develop and implement a site specific nutrient management plan.

Part III A	1	Nutrient Management plan requirements and elements	**Rationale: Required by: § 62.1-44.17:1 E 2 and 9VAC25-31-200 E 1**
	2	Waste Application	**Rationale: Required by: 9VAC25-630-50 Part I B 4 e**
	3	Manure Transfer requirements	**Rationale: Required by: 9VAC25-31-200 E 3**

Land Application Requirements: The permittee is required to meet the land application requirements related to buffer zones. Additionally the installation of best management practices.

Part III B	1	Buffer Zones	**Rationale: Required by: § 62.1-44.17:1 E 3 and 9VAC25-31-**
	2	Best Management Practices	**Rationale: Required by: 9VAC25-31-200 E 1 f**
Part IV	A - Z	Conditions Applicable to All VPDES Permits	**Rationale: Required by:** VPDES Permit Regulation, 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

ATTACHMENT 7

RECEIVING WATERS INFO./ TIER DETERMINATION/STORET DATA/ STREAM MODELING/303(d) LISTED SEGMENTS

Planning Permit Review

Date: 4/18/2014

To: Kristie Britt, TRO

Permit Writer: RE Smithson

Facility: Murphy Brown, LLC Farms 1-5 (Proctors Bridge)

Permit Number: previously VPA01074 convert to VPDES CAFO Permit

Issuance, Reissuance or Modification (if Modification describe): Issuance

Permit Expiration Date: N/A

Waterbody ID (ex: VAT-G15E): K33R

Topo Name: Raynor 37A Topo

Facility Address: *1240 Bacon St., Ivor VA 23890*

Receiving Stream: Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: UT to Blackwater Rv	
Stream Data Requested?	
Outfall #: 001	**Lat Lon: 36 58'37.87"N 76 50'.48.91" W**
Outfall #: 002	**Lat Lon: 36 58'40.66" N 76 50'35.85" W**
Outfall #: 003	**Lat Lon: 36 58'21.66" N 76 50'46.51" W**
Stream Name (2): UT to Blackwater Rv	
Stream Data Requested?	
Outfall #: 004	**Lat Lon: 36 58'31.07" N 76 50'54.58" W**
Outfall #: 005	**Lat Lon: 36 58'24.06" N 76 50'58.56" W**
Outfall #: 006	**Lat Lon: 36 57'53.18" N 76 50' 51.84" W**

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Planning Review:

303 (d): Indicate Outfalls which discharge directly to an impaired (Category 5) stream segment and parameters impaired	
Outfalls 004, 005 and 008 discharge to impaired segment VAT-K33R_BLW01A00. Impairments include E coli, benthics, and Hg.	
The remaining outfalls discharge to impaired stream segments included in VAT-K33R_ZZZ01A00 that is impaired for Hg. See Attachment 1.	
Tier Determination	
Tier	Outfalls 004,005 and 008 discharge to a Tier 1 water based on the benthic impairment. See Attachment 1 and comments below.
Tier	The remaining Outfalls discharge to intermittent/low flow streams and therefore are Tier 1. See Attachment 1.
Management Plan	
Is the facility Referenced in a Management Plan?	No
Are limits contained in a Management Plan?	No

Review will be completed in 30 days of receipt of request.

Additional Comments:

Correction - Outfalls 004, 005 and 008 discharge to Blackwater River.
Additional Information - These outfalls discharge to Class VII water. Blackwater segment VAT-K33R_BLW01A00 is impaired for DO however a Natural Conditions Report was completed that determined the low DO in the stream is not due to anthropogenic sources. The stream will remain listed as impaired in Category 4C (natural and not needing a TMDL for DO). These waters will remain impaired until a Class VII DO standard is set for the Blackwater.
Benthic data for the Blackwater segment is from ProbMon stations 5ABLW052.91 and 5ABLW055.26. These stations have scores below the 40 VCPMI thresholds and therefore are impaired for benthics. Based on Benthic data values Outfalls 004, 005 and 008 are Tier 1.

Until further guidance is provided by OWRM Permits, assessment of waters for NH_3 should be based upon OWRM Guidance No. 93-015 from Larry G. Lawson, dated June 22, 1993.

The above guidance specifies that the ambient NH_3 data should be compared to the NH_3 standard (calculated using 90th percentile of ambient data for pH and temperature of that segment) and by using the "STANDARDS.EXE Program" developed by OWRM Permits Modelling. (These environmental conditions are considered critical design conditions to protect water quality and to comply with WQS.) If the 97th percentile of the in-stream data is greater than either of the calculated NH_3 standards (chronic or acute), then OWRM considers the standard is being violated and the segment is WQL.

2.4.7 Wasteload Allocations Where The 7Q10 Is Zero *Or Minimal*

A discharge to a water course with a 7Q10 of zero or near zero would be required to have effluent limits that would comply with water quality standards, at a minimum. The discharge would have to be "self sustaining" so to comply with water quality standards. Therefore, the discharge would be WQL and the receiving water course with a 7Q10 of zero near zero would be considered a tier 1 segment.

Dry ditch = Tier 1

A discharge to a tier 1 water that empties into a tier 2 water would have to be evaluated for antidegradation at the point of confluence of the two water courses, if the discharge is in close enough proximity to impact the tier 2 water. In the above scenario, antidegradation requirements to protect tier 2 waters may apply to a discharge to a tier 1 water. Therefore, effluent limits may be more stringent than required by the numerical water quality standards.

If a discharge occurs to a dry ditch or tributary that empties into a free flowing stream and the distance from the discharge to the next confluence is too short to model (based upon the current modelling programs), then the discharge should be modelled as if it occurs directly to the free flowing stream.

2.4.8 Estuaries - Wasteload Allocations & TMDL Development

Similar to freshwater streams, water quality wasteload allocations (WQWLAs) and TMDLs in all tidal influenced waters will be expressed as a mass limitation for the conventional parameters (BOD_5, $cBOD_5$, TKN, and NH_3) and as a concentration for toxics.

Tidal freshwater segments and transition zone segments identified

Attachment 1-1

Tier 1 Justification for Low Flow Streams

Attachment

DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER DIVISION

OFFICE OF WATER RESOURCE MANAGEMENT

(SECOND DRAFT)

GUIDANCE MANUAL

FOR THE

VIRGINIA WATER QUALITY MANAGEMENT PLAN

March 4, 1994

Attachment 1-2

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

2012 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

Chowan River and Dismal Swamp Basins

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
K30R-01-DO	Darden Mill Run						
Aquatic Life	Oxygen, Dissolved	5C			10.37	2002	2014
K30R-01-PH	Darden Mill Run						
Aquatic Life	pH	5C			10.37	2004	2016
K30R-02-BAC	Nottoway River - Upper						
Recreation	Escherichia coli	5A			0.47	2008	2020
K30R-03-BEN	Nottoway River - Lower						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			15.36	2012	2022
K31R-04-BEN	Warwick Swamp						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			2.93	2010	2022
K32R-01-BEN	Blackwater River - Lower						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			1.03	2008	2020
K32R-13-HG	Blackwater River Basin						
Fish Consumption	Mercury in Fish Tissue	5A			33.64	2004	2016
	Mercury in Fish Tissue	5A			25.38	2006	2018
	Mercury in Fish Tissue	5A			528.51	2008	2018
	Mercury in Fish Tissue	5A			282.27	2008	2020
	Mercury in Fish Tissue	5A			214.74	2010	2022
	Mercury in Fish Tissue	5A			1.58	2010	2020
	Mercury in Fish Tissue	5A			3.89	2012	2016
K32R-18-BEN	Blackwater River, UT						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			3.13	2008	2020
K33R-02-BAC	Blackwater River - Upper						
Recreation	Escherichia coli	5A			18.94	2008	2020
	Escherichia coli	5A			0.91	2012	2022
K33R-02-BEN	Blackwater River - Upper						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			18.94	2008	2020
K33R-03-BEN	Blackwater River - Lower						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			4.14	2008	2020
	Benthic-Macroinvertebrate Bioassessments	5A			5.03	2012	2020
K34R-01-PH	Mill Swamp						
Aquatic Life	pH	5C			8.36	2010	2022
K35L-01-DO	Airfield Pond						
Aquatic Life	Oxygen, Dissolved	5C		120.07		2008	2020
K35L-01-HG	Airfield Pond						
Fish Consumption	Mercury in Fish Tissue	5A		120.07		2010	2022
K35R-02-BAC	Seacock Swamp - Lower						
Recreation	Fecal Coliform	5A			2.63	2004	2016

Appendix 5 - List of Impaired (Category 5) Waters in 2012

Chowan River and Dismal Swamp Basins

Cause Group Code: **K32R-13-HG** **Blackwater River Basin**

Location: Blackwater River and tributaries from its headwaters to the VA-State Line

City / County: Dinwiddie Co, Isle Of Wight Co, Petersburg City, Prince George Co, South Boston City, Southampton Co, Suffolk City, Surry Co, Sussex Co

Use(s): Fish Consumption

Cause(s) /
VA Category: Mercury in Fish Tissue / 5A

During the 2006 cycle, the Blackwater River from Route 31 near Dendron downstream to the Virginia-North Carolina state line was assessed as impaired of the Fish Consumption Use due to a VDH fish consumption advisory for mercury.

During the 2008 cycle, the advisory was expanded on 8/31/2007 to include the Blackwater River to its headwaters, including all of its tributaries. The advisory currently recommends consuming no more than two meals/month of largemouth bass, sunfish species, bowfin, chain pickerel, white catfish, redhorse sucker and longnose gar.

The advisory is based on the results of DEQ's fish tissue monitoring program, which show mercury exceedances at multiple stations throughout the watershed, including 5ABKR003.68, 5ABKR002.33, 5AWKS013.53, 5ASEC005.39, 5ABLW074.66, 5ACPP004.04, 5ACPP007.86, 5AJCH000.73.

Blackwater River Basin **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			######

Sources:

Atmospheric Deposition - Toxics	Source Unknown

Appendix 5 - List of Impaired (Category 5) Waters in 2012

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K33R-02-BAC** **Blackwater River - Upper**

Location: This cause encompasses the upper portion of Blackwater River in K33. Starts at the Rt 617 crossing (Walls Bridge, RM 58.22) downstream to above Rt 460 crossing @ Zuni (RM 40.23).

City / County: Isle Of Wight Co Southampton Co

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on the E.coli bacteria indicator at the upstream DEQ station @ 5ABLW053.54. At this station 4 samples exceeded the criteria out of 35 observations.

Blackwater River - Upper **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**19.85**

Sources:

Source Unknown

Appendix 5 - List of Impaired (Category 5) Waters in 2012

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K33R-02-BEN** **Blackwater River - Upper**

Location: This cause encompasses the upper portion of Blackwater River in K33. Starts at the Rt 617 crossing (Walls Bridge, RM 58.22) downstream to above Rt 460 crossing @ Zuni (RM 40.23).

City / County: Isle Of Wight Co Southampton Co

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use is not supporting based on benthic data from the 2008 Assessment for Station 5ABLW052.91 and 5ABLW055.26 within Upper Blackwater segment. No new benthic data within the assessment window.

Blackwater River - Upper **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**18.94**

Sources:

Source Unknown

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

2012 List of Naturally Impaired Waters (Category 4C)* No TMDL Needed

Chowan River and Dismal Swamp Basins

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
K32R-11-DO	XDR - UT to Otterdam Swamp				
Aquatic Life	Oxygen, Dissolved	4C			2.61
K32R-15-DO	Spring Branch, UT (XAW)				
Aquatic Life	Oxygen, Dissolved	4C			1.07
K32R-16-DO	Spring Branch, UT (XAL)				
Aquatic Life	Oxygen, Dissolved	4C			0.72
K33R-02-DO	Blackwater River - Upper, Middle, Lower				
Aquatic Life	Oxygen, Dissolved	4C			23.99
K34R-01-DO	Mill Swamp				
Aquatic Life	Oxygen, Dissolved	4C			8.36
K34R-02-DO	Rattlesnake Swamp				
Aquatic Life	Oxygen, Dissolved	4C			6.09
K35R-01-DO	Seacock Swamp - Upper				
Aquatic Life	Oxygen, Dissolved	4C			0.80
K36R-01-DO	Blackwater - Lower Middle				
Aquatic Life	Oxygen, Dissolved	4C			10.21
K36R-02-DO	Blackwater River - Lower Middle				
Aquatic Life	Oxygen, Dissolved	4C			8.19
K36R-03-DO	Washole Creek				
Aquatic Life	Oxygen, Dissolved	4C			0.64
K37R-01-DO	Buckhorn Creek				
Aquatic Life	Oxygen, Dissolved	4C			1.55
K37R-01-PH	Buckhorn Creek				
Aquatic Life	pH	4C			1.55
K38R-01-DO	Somerton Creek				
Aquatic Life	Oxygen, Dissolved	4C			9.09
K39R-01-DO	Dismal Swamp Canal & Feeder Ditch to Lake Drummond				
Aquatic Life	Oxygen, Dissolved	4C			17.58
K41R-02-DO	Milldam Creek - Lower				
Aquatic Life	Oxygen, Dissolved	4C			2.50
K41R-05-DO	West Neck Creek - Middle				
Aquatic Life	Oxygen, Dissolved	4C			3.59
K42E-01-DO	Nawney Creek - Upper				
Aquatic Life	Oxygen, Dissolved	4C	0.022		

VIRGINIA

Draft 305(b)/303(d)

WATER QUALITY INTEGRATED REPORT

to

CONGRESS and the EPA ADMINISTRATOR

for the

PERIOD

January 1, 2005 to December 31, 2010

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

Richmond, Virginia

March 2012

Date: 4/22/2014

To: Jennifer Howell, TRO √ JSH 5/14/2014

Permit Writer: RE Smithson

Facility: Murphy Brown Farms 1-5 (Proctors Bridge), Ivor VA.

Permit Number: previously VPA01074 convert to VPDES CAFO Permit

Issuance, Reissuance or Modification (if Modification describe) : Issuance

Permit Expiration Date: N/A

Waterbody ID (ex: VAT-G15E): Click here to enter text.

Topo Name: Raynor 37A Topo

Facility Address:

1240 Bacon St., Ivor, VA 23890

Receiving Stream: Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: Upper Blackwater River watershed	
Click here to enter text.	
Outfall #: 001	**Lat Lon: 36 58'37.87"N 76 50'.48.91" W**
Outfall #: 002	**Lat Lon: 36 58'40.66" N 76 50'35.85" W**
Outfall #: 003	**Lat Lon: 36 58'21.66" N 76 50'46.51" W**
Stream Name (2): Click here to enter text.	
Click here to enter text.	
Outfall #: 004	**Lat Lon: 36 58'31.07" N 76 50'54.58" W**
Outfall #: 005	**Lat Lon: 36 58'24.06" N 76 50'58.56" W**
Outfall #: 006	**Lat Lon: 36 57'53.18" N 76 50' 51.84" W**

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Is there a design flow change? If yes give the change. Click here to enter text.

TMDL Review:

Is a TMDL IN PROGRESS for the receiving stream? No	
Has a TMDL been APPROVED that includes the receiving stream?	
No, an assessment report was developed because the impairments are caused by natural conditions.(see additional comments)	
If yes, Include TMDL Name, Pollutant(s) and date of approval:	
Dissolved Oxygen Assessment for Blackwater Swamp Waters. EPA Approved 4/8/2010	
Is the facility assigned a WLA from the TMDL?	No
If Yes, what is the WLA?	
NA	

Review will be completed in 30 days of receipt of request.

Additional Comments:

This is page 1 of 2. Note: Maps and outfall locations to be provided in a separate package

*** EPA approved DEQ's determination that low dissolved oxygen levels were naturally occurring and not due to anthropogenic inputs. Therefore, a TMDL was not developed. The river segments are currently in triennial review to be included as Class VII Swamp Waters. The outfalls in this permit are within this watershed. Because this is a new*

VPDES permit within the watershed, every effort should be made to maintain the reduced anthropogenic input and be very well controlled so they do not impact the dissolved oxygen levels. (See "TMDL Attachment 1")

Date: 4/22/2014

To: Jennifer Howell, TRO √ JSH 5/14/2014

Permit Writer: RE Smithson

Facility: Murphy Brown Farms 1-5 (Proctors Bridge), Ivor VA.

Permit Number: previously VPA01074 convert to VPDES CAFO Permit

Issuance, Reissuance or Modification (if Modification describe) : Issuance

Permit Expiration Date: N/A

Waterbody ID (ex: VAT-G15E): Click here to enter text.

Topo Name: Raynor 37A Topo

Facility Address:

1240 Bacon St., Ivor, VA 23890

Receiving Stream: Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: Upper Blackwater River watershed	
Click here to enter text.	
Outfall #: 007	**Lat Lon:** 36 57'56.08"N 76 50'49.92" W
Outfall #: 008	**Lat Lon:** 36 58'15.89" N 76 51'02.53" W
Outfall #: 009	**Lat Lon:** 36 58'09.16" N 76 50'52.16" W
Stream Name (2): Click here to enter text.	
Click here to enter text.	
Outfall #: 010	**Lat Lon:** 36 58'08.15" N 76 50'43.83" W
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Is there a design flow change? If yes give the change. Click here to enter text.

TMDL Review:

Is a TMDL IN PROGRESS for the receiving stream? No	
Has a TMDL been APPROVED that includes the receiving stream?	
No, an assessment report was developed because the impairments are caused by natural conditions.(see additional comments)	
If yes, Include TMDL Name, Pollutant(s) and date of approval:	
Dissolved Oxygen Assessment for Blackwater Swamp Waters. EPA Approved 4/8/2010	
Is the facility assigned a WLA from the TMDL?	No
If Yes, what is the WLA?	
NA	

Review will be completed in 30 days of receipt of request.

Additional Comments:

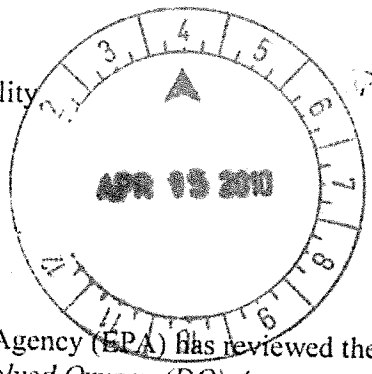
This is page 2 of 2. Note: Maps and outfall locations to be provided in a separate package

** *EPA approved DEQ's determination that low dissolved oxygen levels were naturally occurring and not due to anthropogenic inputs. Therefore, a TMDL was not developed. The river segments are currently in triennial review to*

be included as Class VII Swamp Waters. The outfalls in this permit are within this watershed. Because this is a new VPDES permit within the watershed, every effort should be made to maintain the reduced anthropogenic input and be very well controlled so they do not impact the dissolved oxygen levels. (See "TMDL Attachment 1")

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Ellen Gilinsky, Ph.D., Director
Division of Water Quality Programs
Virginia Department of Environmental Quality
629 E. Main Street
P.O. Box 1105
Richmond, Virginia 23218



Dear Dr. Gilinsky:

The U.S. Environmental Protection Agency (EPA) has reviewed the Virginia Department of Environmental Quality's (VADEQ) *Dissolved Oxygen (DO) Assessment for Blackwater Swamp Waters*, which addresses six Consent Decree segments currently listed as impaired for dissolved oxygen on Virginia's 2008 Section 305(b)/303(d) Integrated Report.[1] VADEQ performed this assessment to confirm that all six segments (Blackwater River (Upper), Blackwater River (Middle, Lower-Middle, Lower, Mouth), Mill Swamp, Rattlesnake Swamp, Upper Seacock Swamp and Tarrara Creek) are impaired due to natural conditions and do not require the development of a Total Maximum Daily Load (TMDL). VADEQ is therefore requesting that these segments be placed in Category 4C of Virginia's 2010 Section 305(b)/303(d) Integrated Report.

As indicated in your assessment, Blackwater River (Upper), Mill Swamp, Rattlesnake Swamp, Upper Seacock Swamp, and Tarrara Creek are currently classified as Class VII Swamp Waters in Virginia's Water Quality Standards. The Class VII designation applies to naturally occurring swamp waters with dissolved oxygen values that may exceed the criteria required for Class I through VI waters. There are no numeric dissolved oxygen criteria for Class VII waters because dissolved oxygen exceedances are a result of natural conditions and are not due to anthropogenic activities. Dissolved oxygen TMDLs are, therefore, not required for Class VII waters. Based upon this information, EPA approves your request to place Blackwater River (Upper), Mill Swamp, Rattlesnake Swamp, Upper Seacock Swamp, and Tarrara Creek in Category 4C of Virginia's 2010 Section 305(b)/303(d) Integrated Report.

Blackwater River (Middle, Lower-Middle, Lower, Mouth) is the only segment in the assessment that is currently classified as a Class II Estuarine Water in Virginia's Water Quality Standards. The dissolved oxygen criteria for Class II waters require a minimum concentration of 4.0 mg/l and a daily average concentration of 5.0 mg/l. VADEQ's, *Procedure for Natural Condition Assessment of low pH and low DO in Virginia Streams: October 2004*, was used to determine whether the dissolved oxygen impairments in the Blackwater River (Middle, Lower-Middle, Lower, Mouth) are being caused by naturally occurring conditions or by anthropogenic

[1] A complete listing history of the impaired segments addressed in this assessment is enclosed.

activities. To make this determination, Virginia's analysis of the dissolved oxygen impairment was conducted using the following procedure:

Step 1. Determine if wetlands are present through appearance and slope/flow measures.
Appearance and slope/flow must be identified for each stream segment to be assessed for potential re-classification. Streams that have naturally low dissolved oxygen levels are characterized by decaying vegetation, low slopes and low velocity flows.

Findings: The assessment of Blackwater River (Middle, Lower-Middle, Lower, Mouth) revealed swampy water conditions characterized by very low slopes (<0.01%) and low velocity flows. Water in the segment also had a distinctive color (>50 PT Color, resembling dark tea) that is indicative of swamp conditions. This coloration is common in swamps and wetlands and is caused by the decomposition of plant material that produces fulvic and humic acids.

Step 2. Determine nutrient levels and compare with U.S. Geological Survey (USGS) background concentrations.
High nutrient levels are an indication of anthropogenic inputs of nitrogen, phosphorus, and possibly organic matter. Streams with average concentrations of nutrients greater than the national background concentrations (USGS 1999) should be evaluated for potential impacts from anthropogenic sources.

Findings: Mean nutrient concentrations for two of the three nutrients that were monitored - total nitrogen (TN) and total phosphorus (TP) - were slightly above the USGS national average background concentrations. Average TN concentrations exceeded the USGS screening values at four of 16 monitoring stations, while average TP exceeded the screening values at one of 16 stations. That said, further evaluation determined that elevated nutrient levels are not having an impact on dissolved oxygen levels in the Blackwater River (Middle, Lower-Middle, Lower, Mouth), as explained in Step 4.

Step 3. Determine degree of seasonal fluctuation of dissolved oxygen levels.
A weak seasonal pattern could indicate that human inputs from point or nonpoint sources are impacting the seasonal cycle of dissolved oxygen. A seasonal analysis must be conducted to verify a consistent seasonal pattern for dissolved oxygen levels.

Findings: Dissolved oxygen was assessed for seasonal fluctuations using a Moods median test. The results indicated that dissolved oxygen shows consistent seasonality.

Step 4. Determine anthropogenic impacts such as permitted dischargers.
Every effort should be made to identify human impacts that could exacerbate low dissolved oxygen levels. Point sources should be identified and Discharge Monitoring Report data analyzed to determine if there is any impact made to the streams dissolved oxygen concentrations.

Findings: There are two point sources discharging nutrients into the Blackwater River (Middle, Lower-Middle, Lower, Mouth), including the City of Franklin Wastewater Treatment Plant - VA0023922, and International Paper - VA0004162. Data from these facilities show that they are very well controlled and are not impacting dissolved oxygen

levels in the Blackwater River (Middle, Lower-Middle, Lower, Mouth). Dissolved oxygen concentrations measured at 16 monitoring stations throughout the segment remain consistent; showing no change at or below the permitted discharge points, where the impact from anthropogenic sources would most likely be found. DEQ also noted that the International Paper Mill is scheduled to shut down in April 2010, which will result in substantial reductions in nutrient loading to the river. In addition, excess organic matter was shown not to be excessive due to the fact that five-day biochemical oxygen demand concentrations were well below the maximum concentration criteria of 4.0mg/L at all monitoring stations. Based upon these results, there is no indication that anthropogenic activities are exacerbating the naturally low dissolved oxygen levels in the Blackwater River (Middle, Lower-Middle, Lower, Mouth).

Upon review of VADEQ's *Dissolved Oxygen (DO) Assessment for Blackwater Swamp Waters*, EPA approves VADEQ's request to place the dissolved oxygen impairments in all six Consent Decree segments under Category 4C of Virginia's 2010 Section 305(b)/303(d) Integrated Report. VADEQ has demonstrated that the dissolved oxygen impairments are occurring naturally, and do not warrant the development of a TMDL. In addition, it is EPA's understanding that VADEQ will request that Blackwater River (Middle, Lower-Middle, Lower, Mouth) be formally reclassified as a Class VII Swamp Water during the next triennial review of Virginia's Water Quality Standards.

If you have any questions or comments please call me, or have your staff contact Greg Voigt, at 215-814-5737.

Sincerely,

for Armstead for

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: David Lazarus, VADEQ

Dissolved Oxygen Assessment for Blackwater Swamp Waters
Section 305(b)/303(d) Listing History

[illegible]	[illegible]	Impairment	1998 305(b) ID	2002 303(d) ID	2004 305(b) ID	2006 305(b) ID	2008 305(b) ID	[illegible]
Blackwater River (upper)	No TMDL Class VII Swamp Water Move to Category 4C	Dissolved Oxygen	VAT-K33R*	VAT-K33R	VAT-K33R-02	01551	K32R-13-DO	VAT-K33R_BLW01A00 VAT-K33R_BLW02A04 VAT-K33R_BLW03A08
Blackwater River (middle, lower-middle, lower, mouth)	No TMDL Class II Estuarine Water Move to Category 4C	Dissolved Oxygen	VAT-K36R*	VAT-K36R	VAT-K36R-01	00639	K32R-13-DO	VAT-K36R_BLW02A08 VAT-K36R_BLW03A08 VAT-K36R_BLW06A08 VAT-K36R_BLW04A08 VAT-K36R_BLW05A08 VAT-K36R_WAC01A08
Mill Swamp	No TMDL Class VII Swamp Water Move to Category 4C	Dissolved Oxygen	VAT-K34R*	VAT-K34R	VAT-K34R-01	00636	K34R-01-DO	VAT-K34R_MSW01A00
Rattlesnake Swamp	No TMDL Class VII Swamp Water Move to Category 4C	Dissolved Oxygen	VAT-K34R*	VAT-K34R	VAT-K34R-02	00637	K34R-02-DO	VAT-K34R_RKN01A02
Upper Seacock Swamp	No TMDL Class VII Swamp Water Move to Category 4C	Dissolved Oxygen	VAT-K35R*	VAT-K35R	VAT-K35R-01	00638	K35R-01-DO	VAT-K35R_SCK01A00
Tarrara Creek	No TMDL Class VII Swamp Water Move to Category 4C	Dissolved Oxygen	VAT-K13R*	VAT-K13R	VAT-K13R-01	00634	K13R-01-DO	VAT-K13R_TRR01A00

*Consent Decree ID

ATTACHMENT 8

TABLE III(a) AND TABLE III(b) - CHANGE SHEETS

TABLE III(a)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes).

N/A - Issuance

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL

TABLE III(b)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes MADE DURING PERMIT PROCESS and give a brief rationale for the changes).

N/A

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL

ATTACHMENT 9

NPDES INDUSTRIAL PERMIT RATING WORKSHEET

NPDES PERMIT RATING WORK SHEET

[ ] Regular Addition
[X] Ratings Confirmation
[ ] Score change, but no status Change
[ ] Deletion

VPDES NO. : VA0C50001

Facility Name: Murphy Brown LLC-Proctors Bridge Farm 1-5
City / County: Ivor/ Isle of Wight County
Receiving Water: UT, Blackwater River
Reach Number:

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power Plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rater

[ ] Yes; score is 600 (stop here) [X] NO; (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

[ ] YES; score is 700 (stop here)
[X] NO; (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary Sic Code: 02131 Other Sic Codes: _____ _____ _____

Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
[X] No process waste streams	0	0	[ ] 3.	3	15	[ ] 7.	7	35
[ ] 1.	1	5	[ ] 4.	4	20	[ ] 8.	8	40
[ ] 2.	2	10	[ ] 5.	5	25	[ ] 9.	9	45
			[ ] 6.	6	30	[ ] 10.	10	50

Code Number Checked: 0
Total Points Factor 1: 0

FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)			Code	Points
Type I:	Flow < 5 MGD	[ ]	11	0
	Flow 5 to 10 MGD	[ ]	12	10
	Flow > 10 to 50 MGD	[ ]	13	20
	Flow > 50 MGD	[ ]	14	30
Type II:	Flow < 1 MGD	[ ]	21	10
	Flow 1 to 5 MGD	[ ]	22	20
	Flow > 5 to 10 MGD	[ ]	23	30
	Flow > 10 MGD	[ ]	24	50
Type III:	Flow < 1 MGD	[ ]	31	0
	Flow 1 to 5 MGD	[X]	32	10
	Flow > 5 to 10 MGD	[ ]	33	20
	Flow > 10 MGD	[ ]	34	30

Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10 %	[ ]	41	0
	10 % to < 50 %	[ ]	42	10
	> 50%	[ ]	43	20
Type II:	< 10 %	[ ]	51	0
	10 % to < 50 %	[ ]	52	20
	> 50 %	[ ]	53	30

Code Checked from Section A or B: 32
Total Points Factor 2: 10

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one) ☐ BOD ☐ COD ☐ Other: _____

Permit Limits: (check one)

		Code	Points
☐	< 100 lbs/day	1	0
☐	100 to 1000 lbs/day	2	5
☐	> 1000 to 3000 lbs/day	3	15
☐	> 3000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

B. Total Suspended Solids (TSS)

Permit Limits: (check one)

		Code	Points
X	< 100 lbs/day	1	0
☐	100 to 1000 lbs/day	2	5
☐	> 1000 to 5000 lbs/day	3	15
☐	> 5000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

C. Nitrogen Pollutants: (check one) ☐ Ammonia ☐ Other: _____

Permit Limits: (check one)

	Nitrogen Equivalent	Code	Points
☐	< 300 lbs/day	1	0
☐	300 to 1000 lbs/day	2	5
☐	> 1000 to 3000 lbs/day	3	15
☐	> 3000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

Total Points Factor 3: 0

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

☒ YES; (If yes, check toxicity potential number below)

☐ NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the *Human Health* toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
☒ No process waste streams	0	0	☐ 3.	3	0	☐ 7.	7	15
☐ 1.	1	0	☐ 4.	4	0	☒ 8.	8	20
☐ 2.	2	0	☐ 5.	5	5	☐ 9.	9	25
			☐ 6.	6	10	☐ 10.	10	30

Code Number Checked: O

Total Points Factor 4: 0

FACTOR 5: Water Quality Factors

A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been given o the discharge*

		Code	Points
[ ]	YES	1	10
[X]	NO	2	0

B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

		Code	Points
[X]	YES	1	0
[ ]	NO	2	5

C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

		Code	Points
[ ]	YES	1	10
[X]	NO	2	0

Code Number Checked: A 2 B 1 C 2

Points Factor 5: A 0 + B 0 + C 0 = **0**

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from factor 2) 32

Check appropriate facility HPRI code (from PCS):

	HPRI#	Code	HPRI Score
[ ]	1	1	20
[ ]	2	2	0
[ ]	3	3	30
[X]	4	4	0
[ ]	5	5	20

Enter the multiplication factor that corresponds to the flow code: .05

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked : 4

Base Score (HPRI Score): 0 X (Multiplication Factor) 0.05 = 0

B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points	
[ ]	1	10	
[X]	2	0	N/A

C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

	Code	Points	
[ ]	1	10	
[X]	2	0	N/A

Code Number Checked: A 4 B 2 C 2

Points Factor 6: A 0 + B 0 + C 0 = **0**

NPDES PERMIT RATING WORK SHEET

VA0C50001

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	0
2	Flows / Streamflow Volume	10
3	Conventional Pollutants	0
4	Public Health Impacts	0
5	Water Quality Factors	0
6	Proximity to Near Coastal Waters	0
	TOTAL (Factors 1 through 6)	10

S1. Is the total score equal to or grater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

☐ YES; (Add 500 points to the above score and provide reason below:

Reason: _____

NEW SCORE : 10

OLD SCORE : N/A

Permit Reviewer's Name : RE Smithson

Phone Number: 757-518-2106

Date: 03/17/14

ATTACHMENT 10

CHRONOLOGY SHEET

VPDES PERMIT PROGRAM

CHRONOLOGY OF EVENTS

ATTACHMENT 10

APPLICATION RECEIVED	APPLICATION RETURNED	ADDITIONAL INFO REQUESTED	APPLICATION/ADD INFO DUE BACK IN RO	APPLICATION/ ADD. INFO RECEIVED
07/21/13		02/28/14		
04/16/14 (revised applic)				04/16/14

APPLICATION TO VDH: 04/16/14 VDH COMMENTS RECEIVED: 04/29/14
APPLICATION TO OWPS: OWPS COMMENTS RECEIVED:
APPLICATION ADMIN. COMPLETE: 04/16/14 APPLICATION TECH. COMPLETE: 04/16/14
DATE FORWARDED TO ADMIN:

Date	DESCRIPTIVE STATEMENT [CHRONOLOGY OF EVENTS] (Meetings, telephone calls, letters, memos, hearings, etc. affecting permit from application to issuance)
04/16/14	Revised application received
04/16/14	Application sent to VDH, DSS, VMRC for comments
04/22/14	Sent to Planning for Tier determination
04/23/14	Revised Draft CAFO Permit, VPDES CAFO Fact Sheet and Definition of Terms Received from OLAP
04/24/14	Fact Sheet revised to reflect template
04/28/14	Fact sheet submitted for preliminary review
04/29/14	VDH comments received
05/06/14	Planning comments/tier determination received
05/15/14	TMDL information received from planning;(forwarded to OLAP with TRO recommendation & soliciting their input)
05/21/14	**DP/FS finalized and sent to EPA/OLAP/owner** (OLAP changed permit NO.S 5/19/14 causing delays)

ATTACHMENT 11

OTHER DOCUMENTS

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director
Maria R. Nold
Regional Director

May 22, 2014

Mr. Kraig Westerbeek, Assist. V.P. Env., Health & Safety
C/O Mr. R.O. Britt, Sr. Env. Resource Manager
Murphy-Brown, LLC
P.O. Box 1240
434 East Main
Waverly, VA 23890

RE: Issuance of VPDES CAFO Permit No. VA0C50001
Murphy-Brown, LLC Farms 1-5 (Proctor's Bridge)
Draft Permit, Fact Sheet and Public Notice

Dear Mr. Westerbeek:

The State Water Control Board is considering issuing the referenced permit. **Please review the enclosed draft permit package with fact sheet and public notice carefully.**

Certain public notice procedures must be complied with before the actual permit can be approved. They are as follows:

1. The attached public notice must be published once a week for two consecutive weeks in a newspaper of general local circulation. *We need the attached authorization to bill form filled out and signed and returned to DEQ, which will allow the newspaper to bill you for the public notice.* In order for you to continue to discharge under state and federal laws, a new permit must be issued by the expiration date of the current permit. The term of the current permit cannot be extended beyond its expiration date if the owner is the cause of the delay in permit reissuance.

2. A minimum of 30 days will be allowed for public response following the date of the first public notice. If no public response is received, or the public response can be satisfactorily answered, then the permit will be processed. However, if there is significant public response, then we may hold a public hearing. You will be advised if this occurs.

If you have any questions or comments on the draft permit or public notice requirements, please contact me at (757) 518-2106.

Sincerely,

Robert E. Smithson, Jr.
Environmental Specialist Senior

Encl: Draft Permit and Fact Sheet, Public Notice

cc: DEQ-TRO ECM File

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of agricultural storm water from grass covered earthen structures that collect runoff from confined animal feeding operation production areas into a water body in Ivor, Virginia (Isle of Wight Co.)

PUBLIC COMMENT PERIOD: 30 days from the first date of this public notice (**date to be inserted by newspaper**)

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Stormwater issued by DEQ, under the authority of the State Water Control Board

NAME ADDRESS AND PERMIT NUMBER OF APPLICANT: Murphy-Brown, LLC-Waverly Division, P.O. Box 1240, 434 E. Main, Waverly VA; 23890; No. VA0C50001.

NAME AND ADDRESS OF FACILITY: Murphy-Brown, LLC Farms 1-5 (Proctors Br.), 12520 Bacon St., Ivor, VA 23866

DISCHARGE LOCATION/RECEIVING STREAM/WATERSHED: Ivor, VA; Unnamed Tributary to Blackwater River; Chowan Rv. and Dismal Swamp Basin watershed. A watershed is the land area drained by a river and its incoming streams.

PROJECT DESCRIPTION: Murphy-Brown, LLC operates a confined animal feeding operation and has applied for the issuance of a permit for the discharge of treated stormwater collected in one of ten grass covered earthen structures (BMPs) that collect runoff from animal production areas. Each BMP is inspected daily to ensure that there are no visible contaminants prior to being released by gate valve to the receiving ditch/stream. If contaminants are observed, a recovery process is first implemented prior to rainwater release. The applicant proposes to discharge an estimated rainfall dependant flow of 0.032 million gallons per day into an unnamed tributary of the Blackwater River. In addition to stormwater & BMP areas, the permit requires monitoring of waste storage structures, treated animal wastewater (51.1 MG generated annually) monitored for nutrients prior to land application (477 acres of hay & row crops under the control of the permittee); soils monitoring at land application sites; and groundwater monitoring.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing hand-delivery, by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: : Robert Smithson, DEQ Tidewater Regional Office, 5636 Southern Blvd. Va. Beach 23462. Tel: 757-518-2106; E-mail: robert.smithsonjr@deq.virginia.gov; Fax: 757-518-2009. The public may review the draft permit and application at the DEQ office named above by appointment or may request copies of the documents from the contact person listed above.

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Smithson Jr., Robert (DEQ)

From: Skiles, Keith (VDH)
Sent: Thursday, May 22, 2014 8:24 AM
To: Smithson Jr., Robert (DEQ)
Subject: RE: Permit Application for Review-Revised Permit #VPA01074 conversion to VPDES, Murphy Brown LLC

Bob,

DSS has no comments on applications VPA1074 and VPA1075. Let me know if you need anything else.

Keith

From: Smithson Jr., Robert (DEQ)
Sent: Wednesday, May 21, 2014 9:02 AM
To: Skiles, Keith (VDH)
Cc: Sauer, Mark (DEQ); Bowles, Betsy (DEQ); Zahradka, Neil (DEQ)
Subject: RE: Permit Application for Review-Revised Permit #VPA01074 conversion to VPDES, Murphy Brown LLC

We have *not received DSS comments on these 2 MB applications.* We are going to EPA with the drafts later this week (delayed due to OLAP permit number changes at the 13th hour) & then to PN shortly thereafter. We would like DSS comments for the record, but if we do not receive them we will go to PN without them & indicate that DSS did not comment.

From: Smithson Jr., Robert (DEQ)
Sent: Tuesday, May 06, 2014 9:21 AM
To: Skiles, Keith (VDH)
Cc: Sauer, Mark (DEQ); Bowles, Betsy (DEQ)
Subject: FW: Permit Application for Review-Revised Permit #VPA01074 conversion to VPDES, Murphy Brown LLC

Keith,

We need your comments on this application ASAP. It is EPA sensitive. Please respond this week with a brief e-mail. Thanks.

From: Smithson Jr., Robert (DEQ)
Sent: Wednesday, April 16, 2014 4:58 PM
To: Horne, Daniel (VDH); Howell, Beth (MRC); Stagg, Ben (MRC); Skiles, Keith (VDH)
Cc: Sauer, Mark (DEQ)
Subject: Permit Application for Review-Revised Permit #VPA01074 conversion to VPDES, Murphy Brown LLC

Smithson Jr., Robert (DEQ)

From: Bowles, Betsy (DEQ)
Sent: Friday, May 16, 2014 5:25 PM
To: Sauer, Mark (DEQ); Smithson Jr., Robert (DEQ); Mullins, Seth (DEQ); Winter, Kyle (DEQ)
Cc: Zahradka, Neil (DEQ)
Subject: RE: Murphy Brown VPDES permits/permit numbers/CEDS
Attachments: RE: VPDES IP Numbers - Murphy Brown Facilities (Isle of Wight Co); VPDES applicant tracking updated 2014 with inspections rev 5 16 14.xlsx

Mark, Thank you for the update. I sent an email updating Mark and Joel with EPA Region III today.

During the conference call yesterday, Bob asked me about finalizing the M-B permit numbers and mentioned printing DMRs. First, I want to provide you all with the new finalized VPDES CAFO Permit numbers (see below) which were finalized today. I am sorry for any inconvenience this may cause but before the drafts are sent out the permit numbers need to be changed so they will conform with the new CEDS formatting.

> VPDES CAFO IP - the permit numbering format shall begin with [**VA0C**] and be followed by five digits. The permit number will be generated by the CEDS system. The next number will indicate the regional office in which the operation is located. The regional identifiers are as follows:

Region	Regional Identifier	Example Number: First permit number
SWRO	1	VA0C10001
BRRO	2	VA0C20001
NRO	3	VA0C30001
PRO	4	VA0C40001
TRO	5	VA0C50001
VRO	6	VA0C60001

> Each permit number will be sequential by region. For example the first permit issued by the Piedmont Regional Office will be VA0C40001 and the tenth permit issued will be VA0C40010. **Please Note: the "0" in "VA0C" is a zero.**

Second, back in February I sent an email stating that these VPDES permits would not be added to Legacy CEDS (see attached email). I checked CEDS yesterday and found that the records are in application classification at this time. I conferred with OIS today and it was determined that the application records need to be deleted in order to avoid any issues with the other modules in CEDS as well as with the future migration into the new permit module.

The spreadsheet that CO and RO staff have been using to track and categorize the VPDES Permit Applicants includes a worksheet (the first tab labeled permit tracking) to track the permit event dates until such time that the new CEDS permit module is made available. I am including another copy of the spreadsheet in this email.

Let me know if there are any events that you feel are missing from the spreadsheet so that I can add them. The permit details (such as: animal types and numbers) and site details (such as: information related to the location – example lat., long., basin information, etc.) will be added when the permit data is added in the new module.

Thank for all your hard work on getting these permits issued.

Have a great weekend,
Betsy

Betsy K. Bowles
Animal Feeding Operations Program Coordinator
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 23219
804-698-4059 direct line
804-698-4032 fax

betsy.bowles@deq.virginia.gov

Mailing Address:
P.O. Box 1105
Richmond, VA 23218

Program Websites:
http://www.deq.state.va.us/Programs/Water/LandApplicationBeneficialReuse/LivestockPoultry.aspx
http://www.deq.state.va.us/Programs/Water/LandApplicationBeneficialReuse/LivestockPoultry/VirginiaPoultryWastenbspManagementRequirement.aspx
http://www.deq.state.va.us/Programs/Water/LandApplicationBeneficialReuse/Agriculture.aspx

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From: Sauer, Mark (DEQ)
Sent: Friday, May 16, 2014 12:07 PM
To: Bowles, Betsy (DEQ); Smithson Jr., Robert (DEQ); Zahradka, Neil (DEQ); Mullins, Seth (DEQ); Winter, Kyle (DEQ)
Subject: Murphy Brown VPDES permits

The Murphy Brown draft VPDES permits and fact sheets for both farms 1-5 and 6-8 are finalized.

Bob has to add a couple of hard-copy documents to the fact sheet attachments and then will scan them and put them in a file share folder Monday morning and will let Betsy and Seth know they are there. At that point I believe Betsy will send them to EPA.

Thanks,

Mark

Mark Sauer
DEQ-TRO Water Permits Section
757-518-2105
mark.sauer@deq.virginia.gov

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Maria R. Nold
Regional Director

April 17, 2014

Mr. Kraig Westerbeek, Assist. VP of Env. Health & Safety
C/O R.O. Britt, Sr. Env. Resource Manager
Murphy Brown, LLC
P.O. Box 1240
Waverly, VA 23890

RE: VPDES CAFO Permit Applications for Farms1-5 & 6-8 (previously VPA01074 & VPA01075)
Murphy Brown, LLC
Waverly VA

Dear Mr. ~~Britt~~ R.O.:

Your revised applications with attachments received April 16, 2014 have been reviewed and they appear to be administratively complete. Other reviews of the application will be required by state agencies to ensure that public health and the environment will be protected.

The next steps involve assembling the information necessary to develop the permit limitations and then drafting the permit. Once the draft permit is prepared and the appropriate reviews are performed, I will transmit the draft permit and supporting documentation to you for review. We anticipate that to occur about Mid-May, barring unforseen circumstances.

Thank you for your cooperation in submitting the completed application. If you have any questions about our procedures or the status of your draft permit, please feel free to call me at (757) 518-2106.

Sincerely,

Robert E. Smithson
Environmental Specialist Senior

cc: DEQ ECM File

COMMONWEALTH of VIRGINIA

Marissa J. Levine, MD, MPH, FAAFP
State Health Commissioner

John J. Aulbach II, PE
Director, Office of Drinking Water

DEPARTMENT OF HEALTH
OFFICE OF DRINKING WATER
Southeast Virginia Field Office

830 Southampton Avenue
Suite 2058
Norfolk, VA 23510
Phone (757) 683-2000
Fax (757) 683-2007

MEMORANDUM

TO: Mr. Robert E. Smithson, Jr.
Environmental Specialist Senior
Department of Environmental Quality - Tidewater Regional Office

DATE: APR 25 2014

RECEIVED – DEQ
APR 29 2014
Tidewater Regional Office

FROM: Daniel B. Horne, PE
Engineering Field Director DBH

CITY/COUNTY: ISLE OF WIGHT COUNTY

PROJECT TYPE: ☐ New ☑ Renewal or Revision

☑ VPDES ☐ VPA ☐ VWPP ☐ JPA ☐ Other_____

☑ Number: VPA01074 (Conversion to VPDES CAFO Permit)

OWNER/APPLICANT: Murphy-Brown, LLC / Mr. Kraig Westerbeek, Asst. Vice President of Environment, Health and Safety

PROJECT: Murphy Brown Farms 1 - 5

☑ There are no public water supply raw water intakes located within 15 miles downstream or within one tidal cycle upstream of the discharge.

☐ The raw water intake for the _____ waterworks is located _____ miles [downstream/upstream] of the discharge. This should be a sufficient distance to minimize the impacts of the discharge. We recommend a minimum Reliability Class of ____ for this facility.

☐ The raw water intake for the _____ waterworks is located _____ miles [downstream/upstream (within one tidal cycle)] of the discharge.

☐ Please forward a copy of the Draft Permit for our review and comment.

☑ Comments: A public water supply raw water intake serving the City of Norfolk withdraws from the Blackwater River at a location approximately 22 miles downstream of this project.

Prepared by: Ernest G. Johnson, Jr., PE
District Engineer EGJ

pc: Ms. Kristen M. Lentz, PE, Director, City of Norfolk, Dept. of Utilities
V.D.H. - Office of Drinking Water, Field Services Engineer

R:\DIST20A\Isle of Wight\VPDES Murphy Brown apr14.doc

Smithson Jr., Robert (DEQ)

From: Smithson Jr., Robert (DEQ)
Sent: Wednesday, April 16, 2014 4:58 PM
To: Horne, Daniel (VDH); Howell, Beth (MRC); Stagg, Ben (MRC); Skiles, Keith (VDH)
Cc: Sauer, Mark (DEQ)
Subject: Permit Application for Review-Revised Permit #VPA01074 conversion to VPDES, Murphy Brown LLC

Below is the link for the above referenced VPDES CAFO permit application. You will find each of your letters in
the fileshare file. Please pull the information that you need off the ftp site. If you have any questions, please let me know.

http://www.deq.virginia.gov/fileshare/wps/permit/tro/VDH,%20DSS,%20VMRC%20For%20Review/VPA01074%20Murphy%20Brown%20Farms%201-5/

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Smithson Jr., Robert (DEQ)

From: RO Britt [ROBritt@murphybrownllc.com]
Sent: Wednesday, March 19, 2014 2:16 PM
To: Smithson Jr., Robert (DEQ)
Cc: Sauer, Mark (DEQ); Bowles, Betsy (DEQ)
Subject: RE: M-B Secondary Containment Procedure

The recovery process ultimately depends on the contaminant. If it were fuel or oil that is one procedure, if it were waste water there would be another procedure. The foundation of all those are similar and as follows:

1. Stop the source
2. Contain the flow
3. Contact the appropriate authority
4. Stay with the incident until relieved
5. Recovery depends on the contaminant

Example: For waste water the water would be pumped either back into the lagoon or recovered and land applied to an application field.

I am not aware of any incident caused rainfall that has demonstrated visual contaminants that required recovery.

R. O. Britt

Senior Environmental Resource Manager | Murphy-Brown, LLC | Post Office Box 1240 / 434 East Main | Waverly | VA | 23890
☎: 804-834-1229 (O) | 🖷: 804-834-8926 (F) | ✉: robritt@murphybrownllc.com

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From: Smithson Jr., Robert (DEQ) [mailto:Robert.SmithsonJr@deq.virginia.gov]
Sent: Wednesday, March 19, 2014 1:59 PM
To: RO Britt
Cc: Sauer, Mark (DEQ); Bowles, Betsy (DEQ)
Subject: RE: M-B Secondary Containment Procedure

This stops short of answering the question. What is the "recovery" process? If there are visible contaminants from runoff, what occurs?. To your knowledge has there ever been an occasion where rainwater runoff collection looked contaminated and a recovery process was implemented?

From: RO Britt [mailto:ROBritt@murphybrownllc.com]
Sent: Wednesday, March 19, 2014 1:24 PM
To: Smithson Jr., Robert (DEQ)
Subject: M-B Secondary Containment Procedure

Bob,

The attached procedure describes our Secondary Containment Management Procedure. Please let me know if you have any questions. Thanks

Douglas W. Domenech
Secretary of Natural Resources

David A. Johnson
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-1712

February 21, 2013

Mr. R. O. Britt
Murphy-Brown Farms 8501, 8502, 8503, 8304 & 8505
P.O. Box 1240
Waverly, VA 23890

Dear Mr. Britt,

Your nutrient management plan (NMP), dated 11/1/2012, for a 52500 head swine operation has been approved by the Virginia Department of Conservation and Recreation for coverage under a Virginia Pollution Abatement (VPA) or Virginia Pollutant Discharge Elimination System (VPDES) permit. Your NMP was written by a nutrient management planner certified by the Virginia Department of Conservation and Recreation.

A copy of this letter must be kept with your nutrient management plan. A copy of this letter and a copy of the approved plan must be sent to the Tidewater Regional Office of the Virginia Department of Environmental Quality (DEQ).

It should be noted that this plan expires 11/1/2015. We recommend the process of revising this nutrient management plan begin at least six months prior to the expiration date.

If you have any questions concerning this letter, please feel free to contact me at bobby.long@dcr.virginia.gov or (434) 547-8172.

Sincerely,

Bobby Long

Bobby Long
Nutrient Management Coordinator – Animal Waste
Division of Stormwater Management

cc: Tim Sexton, DCR Nutrient Management Program Manager
R O Britt
DEQ Tidewater Regional Office

NUTRIENT MANAGEMENT PLAN IDENTIFICATION

Operator
Murphy-Brown LLC
434 East Main Street
Waverly, VA 23890
(804) 834-1229

Integrator:*None*

Farm Coordinates
Easting: 0, Northing: 0, zone: 17

Watershed Summary
watershed: CU59
county: Isle of Wight

Nutrient Management Planner
R.O. Britt
434 East Main Street
Waverly, VA 23890

Certification Code: 571

Acreage Use Summary
Total Acreage in this plan: 477.3

Cropland:	159.2
Hayland:	154.4
Pasture:	0.
Specialty:	163.7

Livestock Summary

Beef Cattle	0
Dairy Cattle	0
Poultry	0
Swine	52500
Other	0

Manure Production Balance

	Imported	Produced	Exported	Used	Net
kgals	0.	79479.2	0.	87849.4	-8370.2
tons	0.	0.	0.	0.	0.

Plan written 11/1/2012
Valid until 11/1/2015

Signature: _____ 3/8/2013
Planner date

Murphy Brown, LLC Farms 8501, 8502, 8503, 8504, & 8505 Narrative

This nutrient management plan is an update for Murphy-Brown LLC farm's 8501, 8502, 8503, 8504, 8505; covered by permit number VPA 01074. These farms are located on one permitted site on Rt. 621 in Isle of Wight County, just south of the Surry County line and just ease of the Southampton County line.

This farm has been converted from a 5,000 sow farrow to finish swine facility to a 52,500 wean to finish swine production facility. The farm is operated by Murphy Brown, LLC. The swine waste produced on this site is stored and treated by a two stage anaerobic lagoon system. Under normal circumstances, effluent from the second stage lagoon system is land applied with irrigation equipment. Irrigation on this site conducted with a combination of application equipment including pivots, hard hose travelers and solid set irrigation. Occasionally application is conducted through the use of an Aerway field applicator. In order to balance effluent utilization, effluent from any lagoon may be applied to any field. There are approximately 477.3 acres of hayand row crop land available for land application.

Crop rotation varies between fields. Crop land is in corn, wheat, double crop grain sorghum, cover crop rotation. The hay is bermuda hay. A portion of the hay acreage is over seeded in fall with small grain that is harvested for hay in the spring.

Commercial fertilizer may be used to supplement crop nutrient needs if effluent application is insufficient to meet the agronomic requirements of the crop. Any commercial fertilizer application will be incorporated in the application records for the farm and will not exceed the nutrient recommendations in this plan. All commercial fertilizer application shall be made in accordance with guidance outlined within this plan.

Effluent on this site is treated in a two stage lagoon system. Samples are taken to establish the nutrient content of both the primary and secondary lagoons. Irrigation is typically conducted with effluent from the secondary lagoon; however irrigation may be conducted from either the secondary or primary lagoon. The appropriate effluent analysis shall be used based on which lagoon the effluent is being irrigated from.

Form Approved
OMB No. 2040-0250

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

FORM 2B NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATIONS FOR PERMIT TO DISCHARGE WASTEWATER
CONCENTRATED ANIMAL FEEDING OPERATIONS AND AQUATIC ANIMAL PRODUCTION FACILITIES

I. GENERAL INFORMATION

Applying for: Individual Permit ☒ Coverage Under General Permit ☐

A. TYPE OF BUSINESS	B. CONTACT INFORMATION	C. FACILITY OPERATION STATUS
☒ 1. Concentrated Animal Feeding Operation (complete items B, C, D, and section II) ☐ 2. Concentrated Aquatic Animal Production Facility (complete items B, C, and section III)	Owner/or Operator Name: Murphy-Brown LLC Telephone: (804) 834-2109 Address: P.O. Box 1240 Facsimile: (804) 834-8926 City: Waverly State: VA Zip Code: 23890	☒ 1. Existing Facility ☐ 2. Proposed Facility

D. FACILITY INFORMATION

Name: Murphy-Brown LLC Farm 1-5 (Proctors Bridge) Telephone: (804) 834-2109
Address: 1240 Bacon Street Facsimile: (804) 834-8926
City: Ivor State: Virginia Zip Code: 23890
County: Isle of Wight Latitude: 36 deg. 58 min. 21 sec. Longitude: 76 deg. 50 min. 47 sec.

If contract operation: Name of Integrator: N/A
Address of Integrator: N/A

II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS

A. TYPE AND NUMBER OF ANIMALS

1. TYPE	2. ANIMALS: NO. IN OPEN CONFINEMENT	2. ANIMALS: NO. HOUSED UNDER ROOF
☐ Mature Dairy Cows		
☐ Dairy Heifers		
☐ Veal Calves		
☐ Cattle (not dairy or veal calves)		
☒ Swine (55 lbs. or over)		36,750
☒ Swine (under 55 lbs.)		15,750
☐ Horses		
☐ Sheep or Lambs		
☐ Turkeys		
☐ Chickens (Broilers)		
☐ Chickens (Layers)		
☐ Ducks		
☐ Other: Specify _____		
3. TOTAL ANIMALS		52,500

B. MANURE, LITTER, AND/OR WASTEWATER PRODUCTION AND USE

1. How much manure, litter, and wastewater is generated annually by the facility? N/A tons 51.1M gallons
2. If land applied how many acres of land under the control of the applicant are available for applying the CAFOs manure/litter/wastewater? 477 acres
3. How many tons of manure or litter, or gallons of wastewater produced by the CAFO will be transferred annually to other persons? 0 tons 0 gallons

Form Approved
OMB No. 2040-0250

C. ☒ TOPOGRAPHIC MAP

D. TYPE OF CONTAINMENT, STORAGE AND CAPACITY

1. Type of Containment	Total Capacity (in gallons)
☐ Lagoon	
☐ Holding Pond	
☐ Evaporation Pond	
☐ Other: Specify _____	

2. Report the total number of acres contributing drainage: 477 acres

3. Type of Storage	Total Number of Days	Total Capacity (gallons/tons)
☒ Anaerobic Lagoon	180	138,111,778 gals.
☐ Storage Lagoon		
☐ Evaporation Pond		
☐ Aboveground Storage Tanks		
☐ Belowground Storage Tanks		
☐ Roofed Storage Shed		
☐ Concrete Pad		
☐ Impervious Soil Pad		
☐ Other: Specify _____		

E. NUTRIENT MANAGEMENT PLAN

Note: Effective February 27, 2009, a permit application is not complete until a nutrient management plan is submitted to the Permitting Authority.

1. Please indicate whether a nutrient management plan has been included with this permit application. ☒ Yes ☐ No

2. If no, please explain:

3. Is a nutrient management plan being implemented for the facility? ☒ Yes ☐ No

4. The date of the last review or revision of the nutrient management plan. Date: 11/01/12

5. If not land applying, describe alternative use(s) of manure, litter, and/or wastewater:

F. LAND APPLICATION BEST MANAGEMENT PRACTICES

Please check any of the following best management practices that are being implemented at the facility to control runoff and protect water quality:

☒ Buffers ☒ Setbacks ☒ Conservation tillage ☐ Constructed wetlands ☐ Infiltration field ☐ Grass filter ☐ Terrace

Form Approved
OMB No. 2040-0250

III. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY CHARACTERISTICS

A. For each outfall give the maximum daily flow, maximum 30-day flow, and the long-term average flow.

B. Indicate the total number of ponds, raceways, and similar structures in your facility.

1. Outfall No.	2. Flow (*gallons per day*)			B. 1. Ponds	B. 2. Raceways	B. 3. Other
	a. Maximum. Daily	b. Maximum 30 Day	c. Long Term Average			

C. Provide the name of the receiving water and the source of water used by your facility.

1. Receiving Water	2. Water Source

D. List the species of fish or aquatic animals held and fed at your facility. For each species, give the total weight produced by your facility per year in pounds of harvestable weight, and also give the maximum weight present at any one time.

1. Cold Water Species			2. Warm Water Species		
a. Species	b. Harvestable Weight *(pounds)*		a. Species	b. Harvestable Weight *(pounds)*	
	(1) Total Yearly	(2) Maximum		(1) Total Yearly	(2) Maximum

E. Report the total pounds of food during the calendar month of maximum feeding.	1. Month	2. Pounds of Food

IV. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. Name and Official Title (*print or type*)	B. Telephone (910) 293-3434
Kraig Westerbeek - Assistant Vice President of Environment, Health, and Safety	
C. Signature	D. Date Signed 8/16/13

Smithson Jr., Robert (DEQ)

From: RO Britt [ROBritt@murphybrownllc.com]
Sent: Wednesday, April 16, 2014 2:10 PM
To: Smithson Jr., Robert (DEQ)
Attachments: CAFO Permit Application - Addendum and Maps MB 6-8.pdf; CAFO Permit Application - Addendum and Maps MB 1-5.pdf

Bob,

Please see the attached files. They include revised maps and the associated Permit Application Addendum. If you have any questions or concerns please let me know. Thanks

R. O. Britt

Senior Environmental Resource Manager | Murphy-Brown, LLC | Post Office Box 1240 / 434 East Main | Waverly | VA | 23890
☎: 804-834-1229 (O) | 🖷: 804-834-8926 (F) | ☑: robritt@murphybrownllc.com

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
CONCENTRATED ANIMAL FEEDING OPERATIONS

PERMIT APPLICATION ADDENDUM

PLEASE TYPE OR PRINT ALL INFORMATION - ALL PARTS OF THIS FORM MUST BE COMPLETED

For DEQ Use Only:
Complete: Yes ☐ No ☐
Initials: _____
Date: _____

I. CONTACT INFORMATION

Owner Name:	Murphy-Brown LLC				
Mailing Address:	P.O. Box 1240				
City:	Waverly	State:	Virginia	Zip Code:	23890
E-Mail Address:	robritt@murphybrownllc.com				
Business Phone:	(804) 834-2109	Mobile Phone:	(804) 731-9603	Home Phone:	
Best day of the week & time to contact the applicant:	Day(s)	Mon.- Fri.	Time(s)	8:00am – 5:00pm	☐ AM ☐ PM

II. FARM/FACILITY INFORMATION

Farm/Facility Name:	Murphy-Brown LLC Farm 1-5 (Proctors Bridge)		
Location:	1240 Bacon Street, Ivor, VA, 23890		
Does Farm/Facility have an existing permit?	X Yes ☐ No	If yes, Permit Number:	VPA01074

RECEIVED DEQ
APR 16 2014
Tidewater Regional Office

III. FARM OPERATING MANUAL

A. Operating Manual been developed for this facility? Has a Farm ☐ Yes X No

B. date of the last review/revision of the Farm Operating Manual. If yes, provide the Date: _____

C. Manual (if already developed) is attached: A copy of the ☐ Yes ☐ No.
The attached copy may be a hard copy or an electronic copy.

IV. GROUNDWATER MONITORING PLAN

A. If the facility has an existing permit, is groundwater monitoring required? X Yes ☐ No

B. If yes, has a Groundwater Monitoring Plan been developed for this facility? ☐ Yes X No ? N/A

C. If yes, provide the date of the last review/revision of the Groundwater Monitoring Plan. Date: _____

D. If no, please explain: A geophysical evaluation of the site is being concluded and the Groundwater Monitoring Plan is in development.

E.

A copy of the Plan (if already developed) is attached: ? Yes X No ? N/A
The attached copy may be a hard copy or an electronic copy.

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Smithson Jr., Robert (DEQ)

From: Smithson Jr., Robert (DEQ)
Sent: Wednesday, March 19, 2014 2:35 PM
To: Sauer, Mark (DEQ)
Subject: FW: M-B Secondary Containment Procedure

> Fact sheet excerpt: Storm water runoff is collected in one of ten secondary containment basins (grass covered earthen structures that collect runoff from production area). Each BMP is inspected daily to ensure that there are no visible contaminants prior to being released by gate valve to the receiving ditch/stream. If contaminants are observed, a recovery process is implemented prior to valve opening to release rainwater. These procedures will be addressed in the Farm Operating Manual.

From: RO Britt [mailto:ROBritt@murphybrownllc.com]
Sent: Wednesday, March 19, 2014 2:16 PM
To: Smithson Jr., Robert (DEQ)
Cc: Sauer, Mark (DEQ); Bowles, Betsy (DEQ)
Subject: RE: M-B Secondary Containment Procedure

The recovery process ultimately depends on the contaminant. If it were fuel or oil that is one procedure, if it were waste water there would be another procedure. The foundation of all those are similar and as follows:

1. Stop the source
2. Contain the flow
3. Contact the appropriate authority
4. Stay with the incident until relieved
5. Recovery depends on the contaminant
   Example: For waste water the water would be pumped either back into the lagoon or recovered and land applied to an application field.

I am not aware of any incident caused rainfall that has demonstrated visual contaminants that required recovery.

R. O. Britt

Senior Environmental Resource Manager | Murphy-Brown, LLC | Post Office Box 1240 / 434 East Main | Waverly | VA | 23890
☎: 804-834-1229 (O) | 🖷: 804-834-8926 (F) | ✉: robritt@murphybrownllc.com

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From: Smithson Jr., Robert (DEQ) [mailto:Robert.SmithsonJr@deq.virginia.gov]
Sent: Wednesday, March 19, 2014 1:59 PM
To: RO Britt
Cc: Sauer, Mark (DEQ); Bowles, Betsy (DEQ)
Subject: RE: M-B Secondary Containment Procedure

This stops short of answering the question. What is the "recovery" process? If there are visible contaminants from runoff, what occurs?. To your knowledge has there ever been an occasion where rainwater runoff collection looked contaminated and a recovery process was implemented?

From: RO Britt [mailto:ROBritt@murphybrownllc.com]
Sent: Wednesday, March 19, 2014 1:24 PM
To: Smithson Jr., Robert (DEQ)
Subject: M-B Secondary Containment Procedure

Bob,

The attached procedure describes our Secondary Containment Management Procedure. Please let me know if you have any questions. Thanks

124

Smithson Jr., Robert (DEQ)

From: Smithson Jr., Robert (DEQ)
Sent: Friday, February 28, 2014 3:26 PM
To: 'RO Britt'
Subject: Outfall Location Maps and Production Area Square Footage

R.O.,
Along with the maps you are providing of each outfall location for Farms1-5 and 6-8, we need to know the total square footage of each contributing production area (stormwater runoff) and if any of the surrounding production area of each outfall has impervious surfaces. If you provide this information that would be a help. If not, provide the input concerning impervious land surfaces, if there are any. Thanks.

Smithson Jr., Robert (DEQ)

From: Bowles, Betsy (DEQ)
Sent: Monday, July 18, 2011 11:58 AM
To: ROBritt (ROBritt@murphybrownllc.com)
Cc: Jenkins, Ray (DEQ); Smithson Jr., Robert (DEQ)
Subject: Confirmation of Continuation of VPA Permits

Mr. R.O. Britt,

This email is confirmation of the continuation of the expired Virginia Pollution Abatement (VPA) permits which authorize the pollutant management activities associated with the swine production farms owned and operated by Murphy-Brown, LLC. The VPA applications for the Murphy-Brown, LLC farms were received on March 8th, 2011 prior to the Department set application deadline of March 9th, 2011 and deemed complete prior to the expiration of the permits {PRO farms - May 4, 2011 and TRO farms - May 9, 2011}. The VPA permit regulation allows for the continuation of expiring VPA permits when specific criteria are met (see below). In accordance with 9VAC25-32-130, the expiring VPA permits listed in the table below were automatically continued given that all of the criteria specified in this section were met.

The VPA permits will remain in effect until VPDES CAFO individual permits are issued to cover activities at each of the facilities for which the VPDES applications were submitted.

Permit Number	Region	Facility Name
VPA00573	PRO	Smithfield Carrolls Farms 13 and 14
VPA00574	PRO	Smithfield Carrolls Farms 9 10 and 21
VPA00575	PRO	Smithfield Carrolls Farm 12
VPA00576	PRO	Smithfield Carrolls Farm 15
VPA00577	PRO	Smithfield Carrolls Farms 16 and 17
VPA00578	PRO	Smithfield Carrolls Farms 18 19 and 20
VPA01074	TRO	Smithfield Carroll's Farms 1 - 5 [Proctors Bridge]
VPA01075	TRO	Smithfield Carroll's Farms 6,7,8 [Dory]

Please find below the excerpt and citation of the regulation which authorizes the Department to continue the permits for the facilities allowing them to continue to operate under the expired VPA permits. As a reminder, the continued VPA permits remain effective and enforceable against the permittee.

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http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+9VAC25-32-130

9VAC25-32-130. Continuation of expiring VPA permits

A. Expiring VPA permits are automatically continued pending issuance of a new VPA permit if:

1. The permittee has submitted a timely and complete application as required by this chapter, unless the board has given permission for a later submittal, which shall not extend beyond the expiration date of the original VPA permit; and
2. The board is unable, through no fault of the permittee, to issue a new VPA permit before the expiration date of the previous VPA permit.

B. Continued VPA permits remain effective and enforceable against the permittee.

Please feel free to contact me if you have any questions.

ATTACHMENT 12

DEFINITIONS OF TERMS

ATTACHMENT 12 -VPDES CAFO FACT SHEET

DEFINITION OF TERMS

Adverse Weather Conditions: means weather conditions that are dangerous or create inaccessibility for personnel, and may include such things as local flooding, high winds, electrical storms, or situations that otherwise make sampling impracticable, such as drought or extended frozen conditions.

Animal Feeding Operation (AFO): means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

(i) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and

(ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Agricultural storm water: means storm water that is not the sole result of land application of manure, litter or process wastewater. Where manure, litter or process wastewater has been applied in accordance with a nutrient management plan approved by the Virginia Department of Conservation and Recreation and in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater, a precipitation-related discharge of manure, litter, or process wastewater from land areas under the control of an animal feeding operation is an agricultural storm water discharge.

Best Management Practice (BMP): means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to surface waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Concentrated Animal Feeding Operation (CAFO): means an AFO that is defined as a Large CAFO or as a Medium CAFO or that is designated as a Medium CAFO or a Small CAFO. Any AFO may be designated as a CAFO by the director in accordance with the provisions of 9VAC25-31-130B. (see table below) {Two or more AFOs under common ownership are considered to be a single AFO for the purposes of determining the number of animals at an operation, if they adjoin each other or if they use a common area or system for the disposal of wastes.}

Animal Type	Number of Animals (stabled or confined as indicated below)		
	Large	Medium [1]	Small [1,2]
Mature Dairy Cattle	700 or more	200 to 699	Less than 200
Cattle (other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs)	1,000 or more	300 to 999	Less than 300
Veal calves	1,000 or more	300 to 999	Less than 300
Swine (weighing over 55 pounds)	2,500 or more	750 to 2,499	Less than 750
Swine (weighing less than 55 pounds)	10,000 or more	3,000 to 9,999	Less than 3,000
Turkeys	55,000 or more	16,500 to 54,999	Less than 16,500
Laying hens or broilers (liquid manure (manure as defined in Part IV AA.) handling systems)	30,000 or more	9,000 to 29,999	Less than 9,000
Chickens other than laying hens (other than a liquid manure (manure as defined in Part IV AA.) handling systems)	125,000 or more	37,500 to 124,999	Less than 37,500
Laying hens (other than a liquid manure (manure as defined in Part IV AA.) handling systems)	82,000 or more	25,000 to 81,999	Less than 25,000
Horses	500 or more	150 to 499	Less than 150
Sheep or Lambs	10,000 or more	3,000 to 9,999	Less than 3,000
Ducks (other than a liquid manure (manure as defined in Part IV AA.) handling systems)	30,000 or more	10,000 to 29,999	Less than 10,000
Ducks (liquid manure (manure as defined in Part IV AA.) handling systems)	5,000 or more	1,500 to 4,999	Less than 1,500

1 Either one of the following conditions are met:

(A) Pollutants are discharged into surface waters (surface waters as defined in Part IV AA.) of the State through a man-made ditch, flushing system, or other similar man-made device; or

(B) Pollutants are discharged directly into surface waters (surface waters as defined in Part IV AA.) of the State which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

2 Must be designated by the Department as a significant contributor of pollutants to surface waters (surface waters as defined in Part IV AA.).

ATTACHMENT 12 -VPDES CAFO FACT SHEET

DEFINITION OF TERMS

Continued….

Land application area: means land under the control of an AFO owner or operator, that is owned, rented, or leased to which manure, litter or process wastewater from the production area may be applied.

Manure: means manure bedding, compost and raw materials or other materials commingled with manure or set aside for disposal.

Measurable Storm Event: means a storm event that results in an actual discharge from the site.

Overflow: means the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structure.

Poultry Waste End-User or End-User: means any recipient of transferred poultry waste who stores or who utilizes the waste as fertilizer, fuel, feedstock, livestock feed, or other beneficial end use for an operation under his control.

Poultry Waste: means dry poultry litter and composted dead poultry.

Process Wastewater: Process wastewater from an AFO means water directly or indirectly used in the operation of the AFO for any of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing, or spray cooling of the (confined) animals; or dust control. Process wastewater from an AFO also includes any water that comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs or bedding.

Production Area: means that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage areas include but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions that separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

Runoff Diversion Structures: see Storm Water Diversion Device.

(Storm Event) - 25-year, 24-hour Storm: means precipitation events with a probable recurrence interval of once in twenty five years as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May, 1961, or equivalent regional or State rainfall probability information developed from this source. In Virginia, the rainfall from a 25-year, 24-hour storm event ranges from four to seven inches depending upon your location in the State.

Storm Water: means storm water run-off, snow melt run-off, and surface run-off and drainage.

Storm Water Diversion Device: means a device or a structure used to change the path of storm water.

Surface Waters: means

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as surface waters under this definition;
5. Tributaries of waters identified in subdivisions 1 through 4 of this definition;
6. The territorial sea; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in subdivisions 1 through 6 of this definition.

Vegetated Buffer: means a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

Waste: means manure, poultry waste and process wastewater, for the purposes of this permit.